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# The DeFi Yield Renaissance

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## Five key takeaways

- DeFi yields are transitioning from token rewards to sustainable, fee-driven revenue models, surpassing \$6B in fees earned in 2024.
- Onchain lending is flourishing from higher borrowing demand, with USD yields averaging ~10%, far outpacing TradFi returns.
- Bridging and staking are safer than ever, with stronger risk management making them foundational elements of DeFi.
- Bitcoin staking could unlock \$100B in idle capital, potentially increasing DeFi TVL by over 50%.
- Innovations like restaking, perpetual DEXs, and real-world assets are rebalancing DeFi's tradeoffs, unlocking more efficient ways to generate yield and scale the ecosystem.

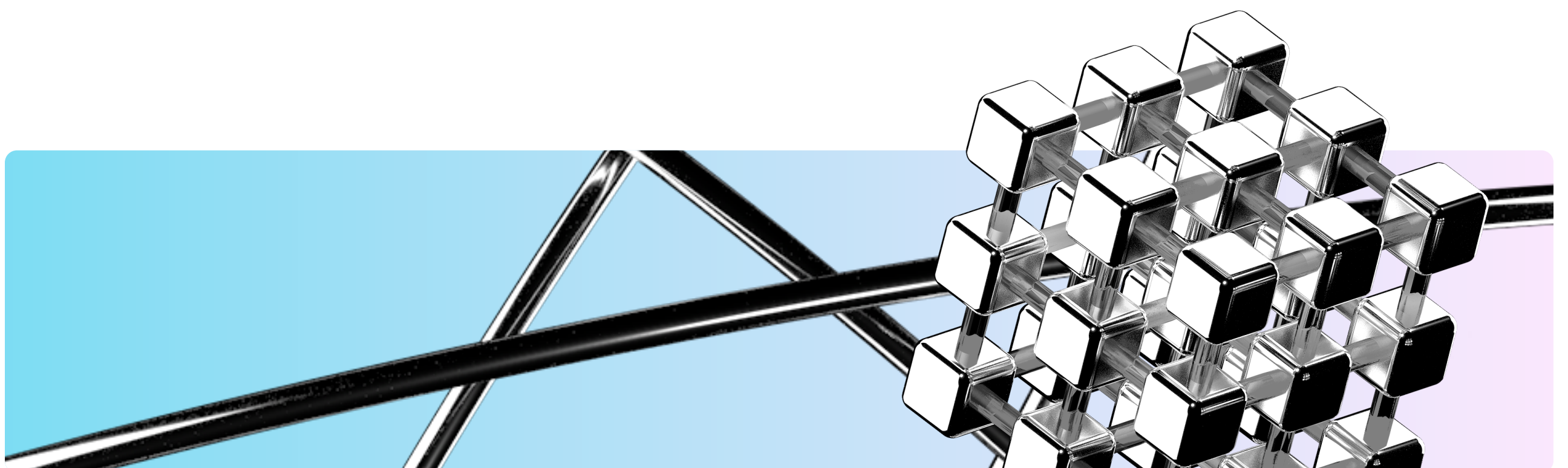
## Introduction

DeFi has transcended its incentive-driven origins, evolving into an ecosystem where real utility and sustainable fee models are taking center stage. While critics like Vitalik Buterin have labeled DeFi an ouroboros — dependent on the perpetual motion of crypto trading — this view overlooks the sector's steady progression toward sustainability.

In 2024, 77% of DeFi yields came from real fee revenues — a notable improvement from the reward — heavy emissions of the past. Yes, trading volumes still contribute to this, but a growing share stems from services that address tangible demands: stablecoin transactions for remittances, lending and borrowing for actual liquidity needs, decentralised derivatives trading for hedging, and the tokenization of real-world assets. It's a sign of a maturing industry, one whose revenue is rooted in providing actual utility rather than relying solely on token incentives or speculative fervor.

DeFi's maturation is further highlighted by the \$6B in yield earned by liquidity providers in 2024, a testament to the ecosystem's ability to generate real cash flows. This growth has been driven by its foundational pillars, which include staking, lending, market making, and bridging, and they provide critical infrastructure for capital efficiency, liquidity, and interoperability. These are bona fide financial services delivered onchain, enabling DeFi to emerge as a cornerstone of the global financial system.

With momentum accelerating across the ecosystem, DeFi is proving its ability to scale sustainably and attract capital from both retail and institutional investors. The questions of yesterday — about risk, decentralisation, and economic design — are giving way to a new era of growth and innovation. What follows is a closer look at the forces driving this evolution and the opportunities that lie ahead for DeFi to reach even greater heights.



## DeFi yields are transitioning from token rewards to sustainable, fee-driven revenue models, surpassing \$6B in fees earned in 2024

In the early days of DeFi, protocols relied heavily on token rewards to bootstrap liquidity and attract users. While effective initially, this approach often resulted in unsustainable emissions, diluting token value and creating fleeting incentives. Over the past year, however, DeFi has seen a meaningful shift toward more sustainable, fee-driven yield models, reflecting the ecosystem's growing maturity.

This transition aligns with broader market trends as users prioritize yield sustainability and protocols compete on efficiency rather than emissions. Protocols like Lido, Uniswap, and Aave have demonstrated that real, fee-based revenues are not only achievable but are becoming the foundation of DeFi's yield generation. Across all DeFi protocols, total fees earned by liquidity providers in 2024 surpassed \$6B. DeFi's total market cap reached \$130B in 2024, which positions the sector at an approximate 20x P/E multiple — a compelling valuation for a rapidly growing industry that continues to outpace traditional finance in innovation and adoption.

GRAPH 1 PROTOCOL RANKING BY FEES

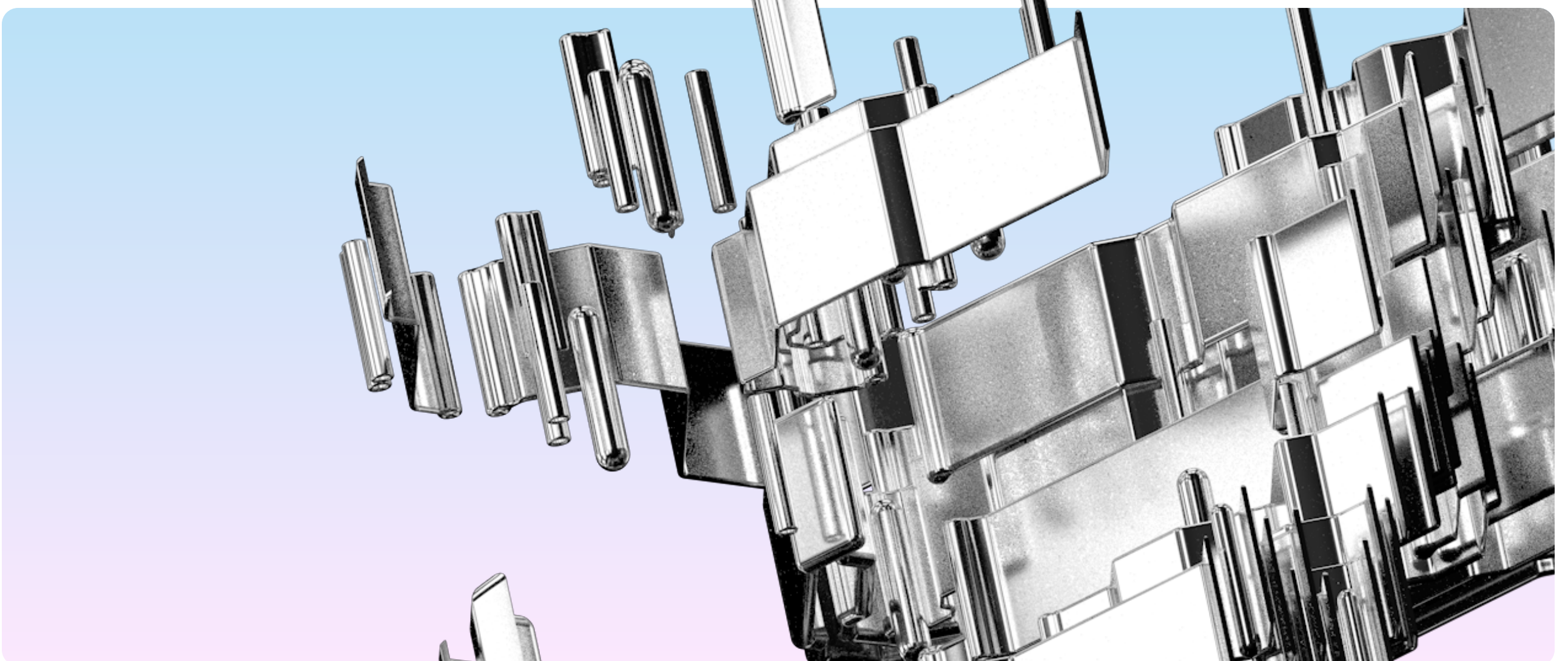


Source: Exponential.fi, [DeFiLlama](#)

Lending protocols, for example, now generate the majority of their yields from borrow rates rather than token incentives. Similarly, decentralised exchanges (DEXs) like Uniswap continue to generate substantial trading fees for liquidity providers without any incentives. In the staking sector, liquid staking tokens (LSTs) provide stakers with staking rewards from protocol emissions, gas fees, and MEV sharing.

The shift away from rewards has also reduced systemic risk. High token emissions often encouraged “hot money,” which would flow rapidly in and out of protocols, increasing volatility and vulnerability. By transitioning to fee-driven models, DeFi is attracting more stable capital, reinforcing the long-term health of the ecosystem.

As DeFi continues to evolve, the reliance on token rewards will likely diminish further and be replaced by scalable, user-driven revenue. This trend not only enhances protocol sustainability but also makes DeFi yields more attractive to institutional investors, who increasingly view the sector as a viable alternative to traditional financial instruments.

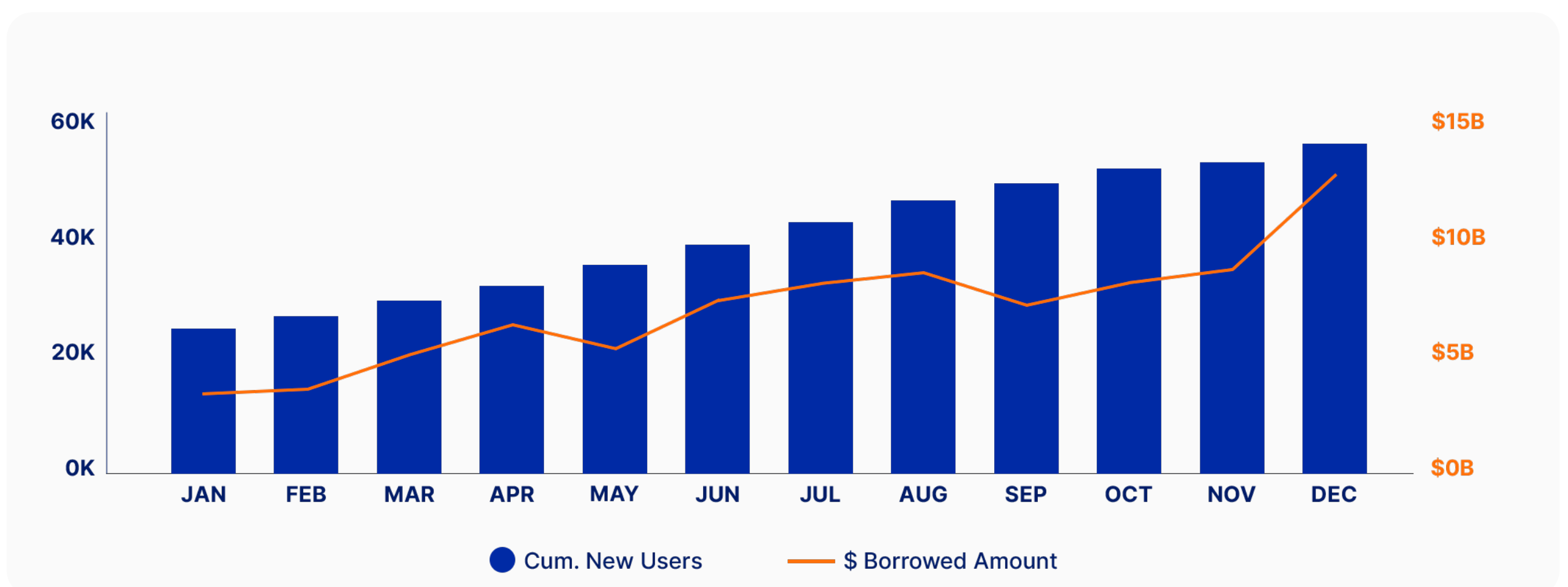


## Onchain lending is flourishing from higher borrowing demand, with USD yields averaging ~10%, far outpacing TradFi returns

The onchain lending market reached new milestones in 2024, with total value locked (TVL) in lending protocols surpassing \$54.1B — an all-time high and a 139% increase from 2023. This growth has been fueled by a combination of rising yields, increasing demand for leverage in crypto markets, and improvements in risk management that have made DeFi lending more secure and accessible.

Borrowing activity surged during the year, particularly in Q4, driving significant earnings for lenders. Aave, the dominant lending protocol, led this expansion, with outstanding borrows increasing over 4x, from \$3.4B to \$14.5B by year-end. Over the same period, Aave more than doubled its user base to around 60,000 unique borrowers. Borrow rates in Aave's USDC market climbed from 6% APY at the start of the year to a peak of 17% during the Q4 rally, before stabilizing around 10%.

GRAPH 2 AAVE - NEW USER GROWTH & OUTSTANDING BORROWS 2024

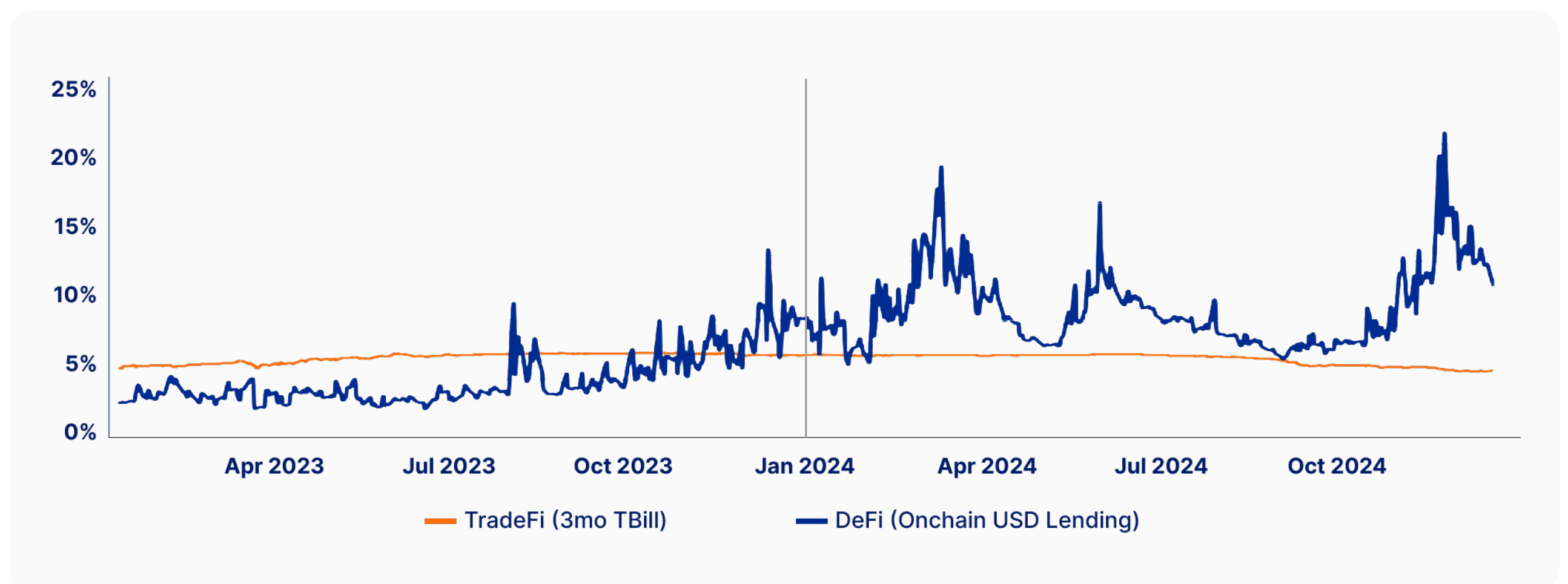


Source: Exponential.fi, Artemis, [Dune Analytics](#)

Morpho, a rising star in the lending sector, has gained traction with its innovative approach to risk management. By combining isolated lending vaults, an immutable design, and risk curation, Morpho delivers tailored solutions for niche assets, reducing systemic risk while attracting a growing user base. In 2024, outstanding borrows on the platform surged from under \$814M to over \$2B, generating \$57M in interest for lenders by year-end. This remarkable growth highlights the increasing demand for secure, efficient lending models in DeFi that balance yield generation with risk mitigation.

DeFi lending yields are increasingly competitive with traditional finance returns, particularly as recent changes to central bank policies have pressured cash savings rates. While TradFi yields declined in the second half of 2024, onchain lending yields consistently exceeded 10% across top protocols, driven by heightened borrowing demand. This yield premium is making DeFi an attractive option for yield-seeking investors and further accelerating adoption among both retail and institutional users.

GRAPH 3 TRADFI VS. DEFI YIELDS



Source: Exponential.fi, Defillama

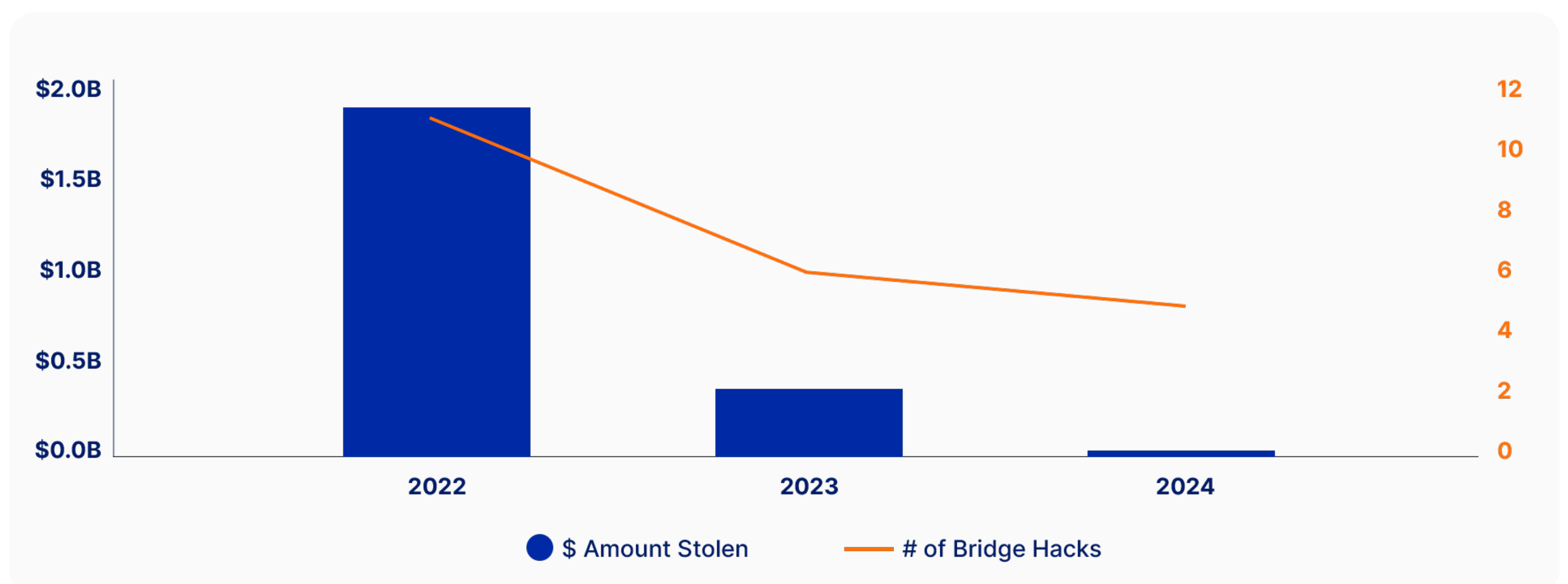
Improved risk management has also played a critical role in the sector's growth. Protocols like Aave have maintained their reputation for security, avoiding major exploits and implementing features like isolated markets to manage risk more effectively. The maturation of lending protocols has reduced systemic vulnerabilities and reassured users, contributing to the steady inflow of capital into DeFi lending pools.

The increasing gap between DeFi and TradFi yields underscores a broader trend: onchain lending is no longer just a niche product but a compelling alternative to traditional financial instruments. With borrowing demand remaining strong and protocols continuously improving efficiency and security, DeFi lending is positioned to attract even more capital in 2025.

## Bridging and staking are safer than ever, with stronger risk management making them foundational elements of DeFi

The bridging sector, once notorious for high-profile exploits, experienced a dramatic decline in security incidents. Losses from bridge hacks dropped by over 95% year-over-year, with only \$19M in funds compromised. This dramatic reduction reflects the sector's growing maturity and its ability to address long-standing vulnerabilities, restoring confidence in cross-chain infrastructure.

GRAPH 4 CRYPTO HACKS RELATED TO BRIDGES



Source: Exponential.fi, [Rekt Database](#)

Meanwhile, bridging total value locked (TVL) climbed to \$50.7B by December, highlighting sustained demand for cross-chain liquidity. Innovations like intent-based mechanisms and native token bridging solutions have played a pivotal role in reducing risk and improving the user experience in cross-chain interactions.

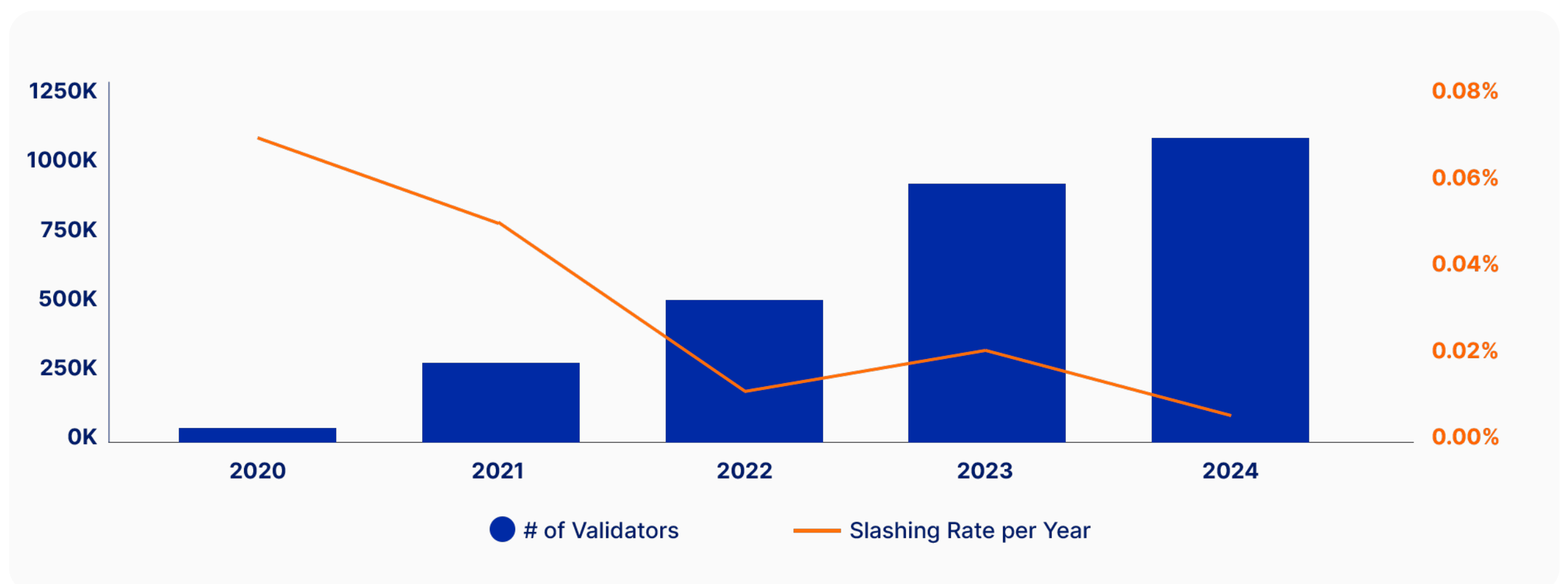
Intent-based mechanisms shift execution risks from users to solvers by allowing users to specify their desired outcomes, such as transferring tokens to another chain, without managing the underlying processes. Solvers, operating within a competitive auction framework, handle execution, ensuring transactions are both efficient and secure. This design minimises user exposure to transaction failures or vulnerabilities, as solvers bear the responsibility for execution risks.

Native token bridging solutions, such as Circle's Cross-Chain Transfer Protocol (CCTP), further enhance security by eliminating the need for wrapped tokens. Instead of locking assets on one chain and minting a wrapped version on another, these solutions use mechanisms like burn-and-mint, where tokens are burned on the source chain and freshly minted on the destination chain. By bypassing the need to hold large reserves of locked assets in bridge contracts — a common feature of many DeFi bridges — this approach significantly reduces the large, exploitable honeypots that have historically been targeted in bridge hacks.

Similarly, staking has solidified its position as the backbone of blockchain network security, with Ethereum leading the way after its successful transition to Proof-of-Stake (PoS). Staking TVL reached new heights in 2024, driven by Ethereum's growing participation rate, which doubled to 28% following the Shapella upgrade. Liquid Staking Tokens (LSTs) played a crucial role in this growth, offering users the ability to stake assets while maintaining liquidity.

Despite concerns about slashing risks, the data shows these incidents remain exceedingly rare. For example, less than 0.04% of ETH validators have been slashed since the launch of Ethereum's Beacon Chain in December 2020, with only 0.01% slashed in 2024, underscoring the reliability of modern staking protocols.

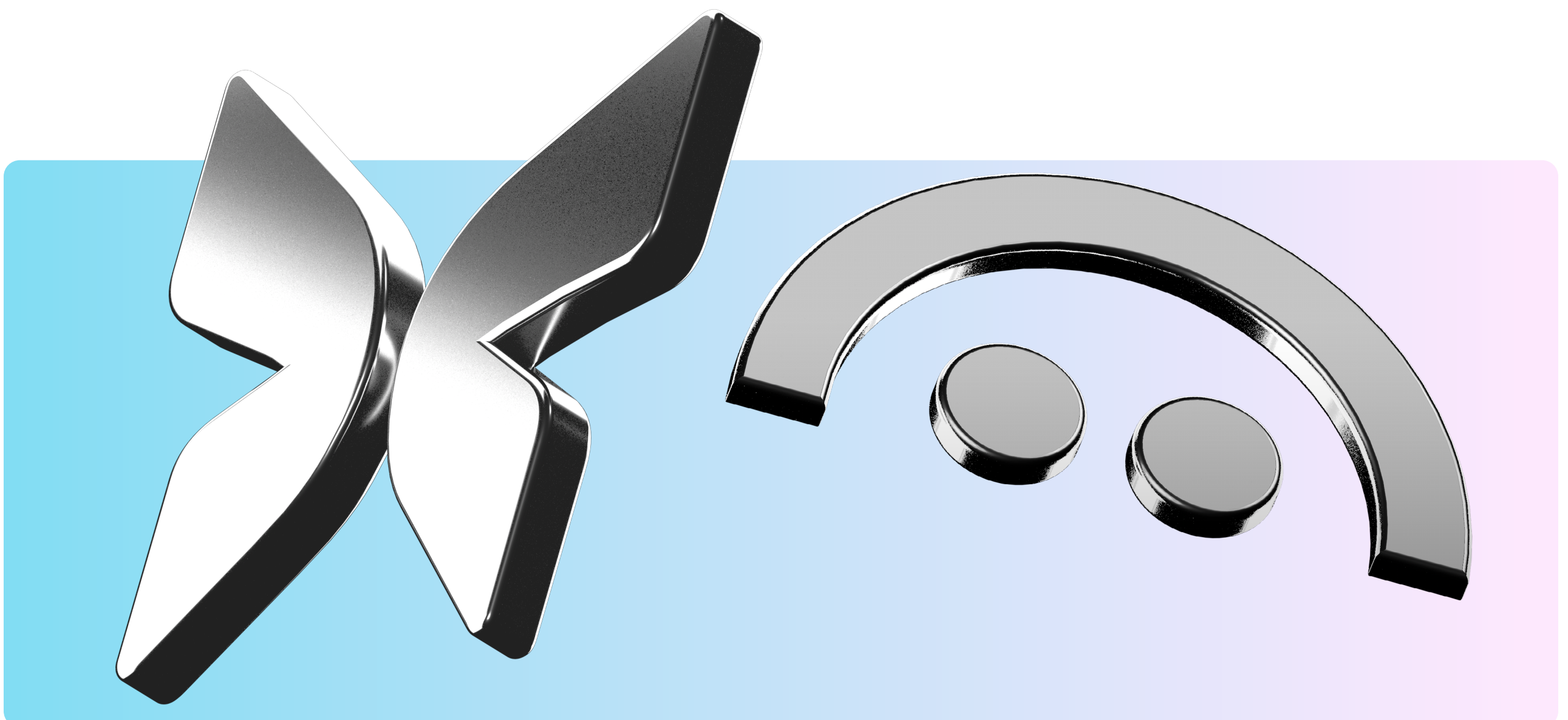
GRAPH 5 ETH VALIDATORS AND SLASHING RATE



Source: Exponential.fi, [Rekt Database](#)

Innovations like Distributed Validator Technology (DVT) have further strengthened the security of staking pools by decentralising validator responsibilities across multiple operators. This approach reduces the likelihood of slashing caused by downtime or operator errors, providing an added layer of protection for stakers.

As bridging becomes more efficient and staking more accessible, these two sectors are cementing their roles as pillars of the DeFi ecosystem. The reduced exploit rates in bridging and the growing resilience of staking demonstrate how far DeFi has come in addressing its early vulnerabilities. With continued innovation, these components will remain central to the expansion of DeFi.

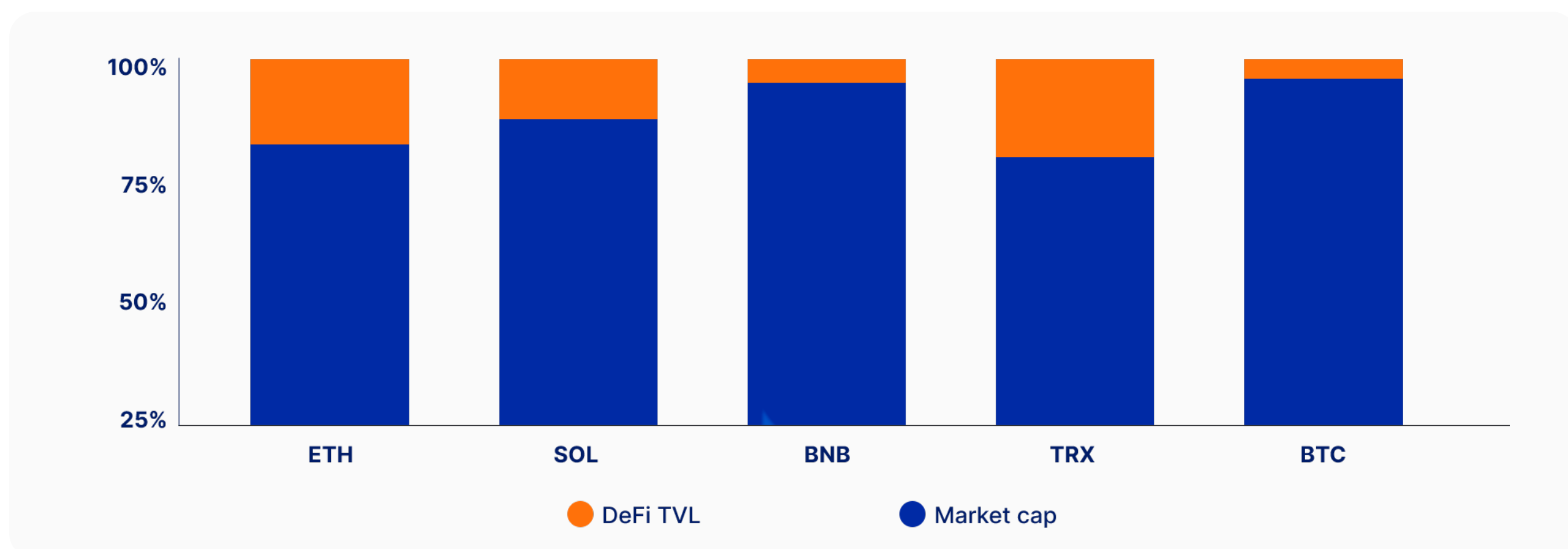


## Bitcoin staking could unlock \$100B in idle capital, potentially increasing DeFi TVL by over 50%

Bitcoin's role as the world's most established crypto asset has historically been defined by passive HODLing, with over \$2 trillion in BTC largely sitting idle. However, new primitives like Bitcoin staking are changing this narrative, offering HODLers and institutions the opportunity to generate yield while securing Proof-of-Stake (PoS) networks. Even a modest shift of just 5% of idle BTC into staking could inject \$100B into DeFi, driving TVL growth by over 50%.

This estimate is conservative when compared to other major assets. Ethereum's DeFi TVL is equivalent to 30% of its market cap, while Solana and Tron boast TVL ratios of 19% and 35%, respectively. Even Binance Chain, which has a lot of its value associated with its centralized exchange, has a TVL ratio of ~7%. In contrast, Bitcoin's TVL sits at less than 0.5% of its market cap today, leaving significant room for growth.

GRAPH 6 DEFI TVL RELATIVE TO MARKET CAP



Source: Exponential.fi, DeFiLlama

Bitcoin staking is a novel approach introduced by Babylon's innovative protocol to utilize BTC to secure PoS systems. The protocol works by creating a two-sided marketplace, pairing BTC holders seeking yield with PoS chains that require additional economic guarantees. PoS chains can benefit from Bitcoin's vast liquidity and security, offering staking rewards without relying solely on token emissions. This marks a fundamental shift from passive HODLing to actively generating sustainable yields by securing other decentralised networks for BTC holders.

Babylon’s design addresses key risks associated with making BTC a productive asset. First, BTC is locked directly on the Bitcoin blockchain using advanced cryptography, eliminating the vulnerabilities associated with cross-chain bridges. Second, slashing mechanisms ensure validators are disincentivized from malicious behavior, enhancing network security. Lastly, Bitcoin staking solves one of PoS’s largest challenges — long unbonding periods — by leveraging Bitcoin’s timestamps to create faster and more secure unbonding processes.

The protocol has seen tremendous growth in just a short amount of time. In 2024 alone, Babylon attracted over 57,000 BTC (~\$6B) from 135,000 stakers, placing it among the top 10 DeFi protocols by TVL. Building on this momentum, platforms like Lombard and Solv have introduced liquid staking tokens (LSTs) such as LBTC and SolvBTC, which allow Bitcoin holders to remain liquid while earning staking rewards. LBTC, for instance, quickly amassed a market cap of \$1.5B and can be deployed across other DeFi protocols like Pendle and Morpho for additional yield opportunities.

Currently, Babylon is in a guarded launch phase, with staking rewards not yet live. Instead, participants earn Babylon points, which are expected to convert into a token airdrop for early adopters. LSTs further enhance this dynamic, offering their own points programs in addition to Babylon points. While actual yields are not yet available, Ethereum’s staking yield can provide a reasonable benchmark for Babylon, with the potential to deliver annual returns of ~3-4% when live.

#### GRAPH 7 BITCOIN STAKING COMPARATIVE ANALYSIS

	<b>NATIVE STAKING (BABYLON)</b>	<b>LIQUID STAKING (LOMBARD + SOLV)</b>	<b>TRADITIONAL BTC DERIVATIVES</b>
<b>TOKENS</b>	N/A	LBTC, SolvBTC, BBN	WBTC, cbBTC
<b>LIQUIDITY</b>	None	Fully Liquid	Fully liquid
<b>RISK</b>	Self-custodial vault	Custody challenges	Centralized
<b>YIELD/REWARDS</b>	BTC staking rewards + Babylon points	Babylon staking rewards + Babylon points + LST protocol points + additional DeFi yield	None
<b>TARGET USER</b>	BTC holders looking to earn yield from Bitcoin staking	BTC holders looking to earn yield from Bitcoin staking, while remaining liquid to participate in DeFi	BTC holders looking to participate in DeFi

Source: Exponential.fi

By unlocking Bitcoin’s liquidity, staking not only boosts TVL but also reduces reliance on emissions-driven rewards, further aligning DeFi with fee-based, sustainable revenue models. With trustless infrastructure and liquid staking innovations, Bitcoin staking is poised to redefine BTC’s role — turning a historically static asset into an active participant in the DeFi ecosystem.

## Innovations like restaking, perpetual DEXs, and real-world assets are rebalancing DeFi's tradeoffs, unlocking more efficient ways to generate yield and scale the ecosystem

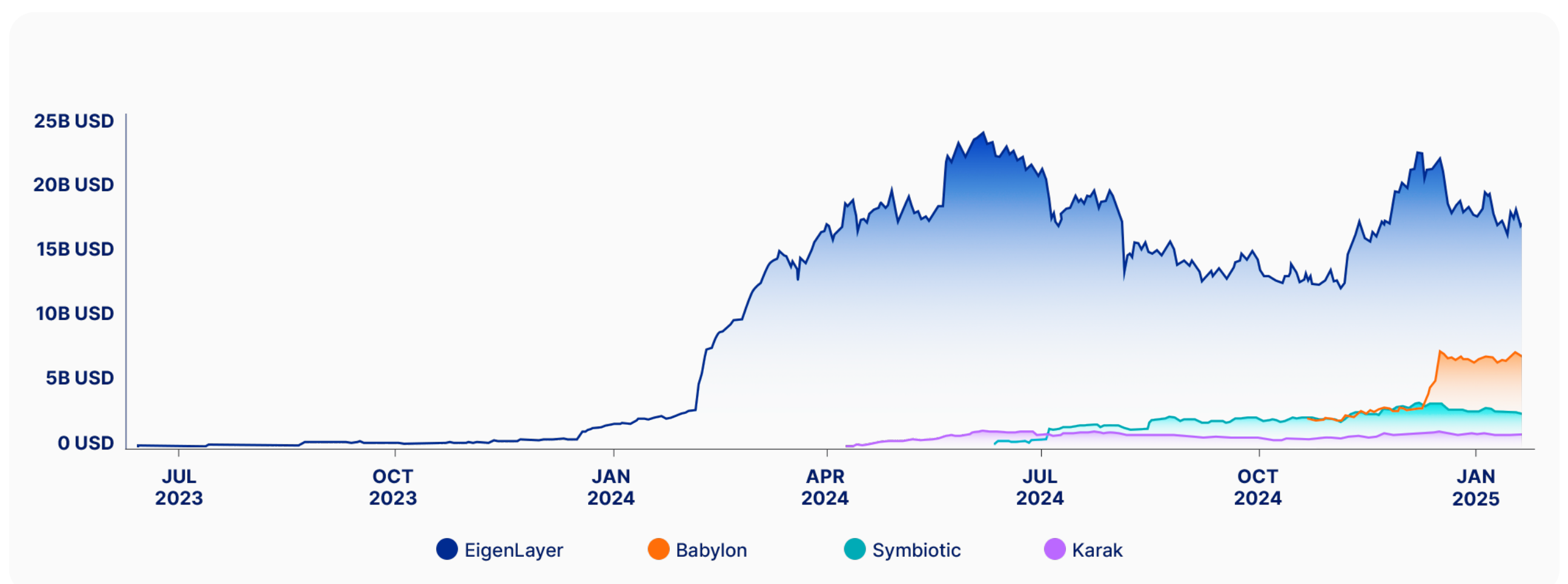
DeFi has long been defined by its tradeoffs between decentralisation and efficiency. However, new innovations like restaking, perpetual decentralised exchanges (perp DEXs), and real-world assets (RWAs) address these challenges, creating more scalable and capital-efficient ways to generate yield.

By rebalancing the tradeoffs between efficiency and trustlessness, these innovations not only expand DeFi's yield potential but also enhance its ability to compete with traditional finance. As adoption grows, they are set to play pivotal roles in shaping the next phase of DeFi's evolution.

### Restaking: Extending security for new sources of yield

Restaking allows validators to repurpose their staked tokens, simultaneously securing multiple networks or decentralised applications (dApps). Initially popularized by EigenLayer, restaking has since expanded across chains like Ethereum, Solana, and Bitcoin. By creating a shared pool of security, restaking enables smaller protocols to leverage the economic guarantees of larger networks without building independent validator sets.

GRAPH 8 RESTAKING TVL GROWTH (2023-2024)



Source: DeFiLlama

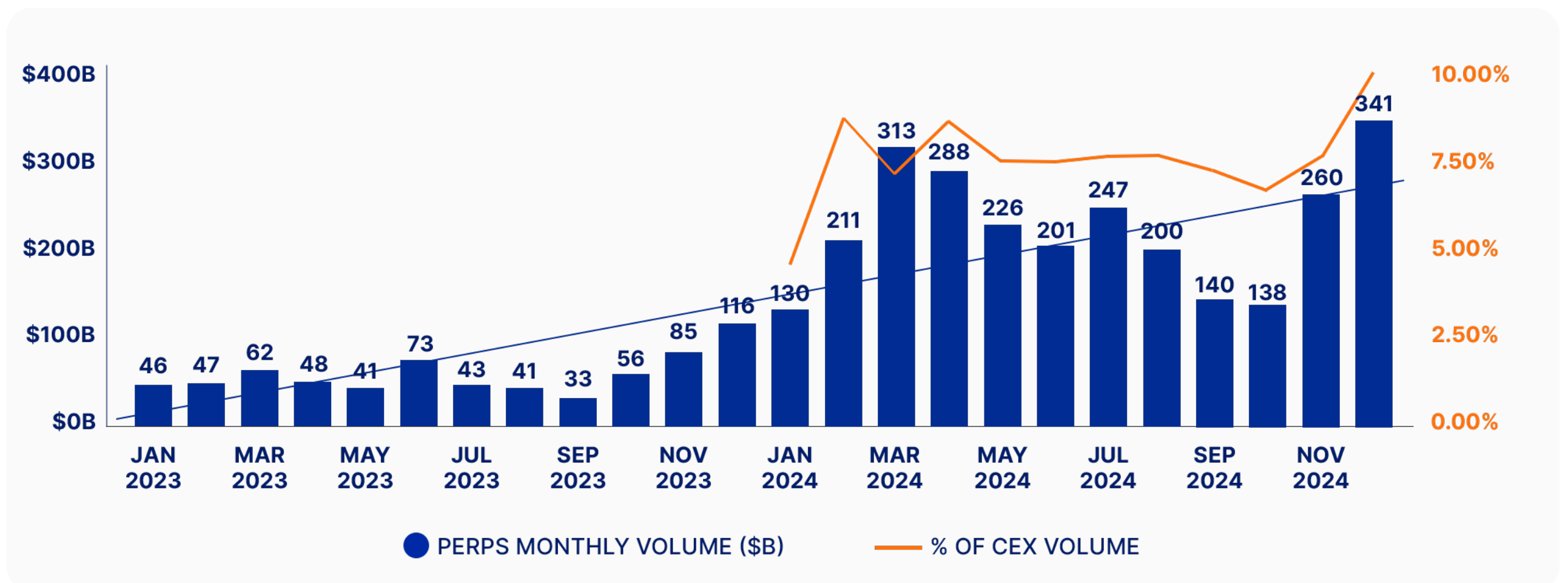
This model is highly capital efficient, as it requires no additional funds beyond the initial staked tokens. Validators earn yield from multiple sources, including token emissions, transaction fees, and shared revenue from applications like oracles and bridges. Total Value Locked (TVL) in restaking protocols surpassed \$26 billion in 2024, with Ethereum capturing 75% of the restaking market.

However, the sustainability of restaking yields is uncertain, as much of the current yields are driven by token rewards. Platforms ultimately will need to transition to actual fee-based revenue from their services to ensure long-term viability. If successful, restaking could redefine the economics of securing decentralised systems, potentially paving the way for an explosion of new DeFi innovations.

## Perpetual DEXs: Yield through trader performance

Perpetual DEXs, such as Hyperliquid and dYdX, offer a different approach to yield generation, with returns directly tied to trading activity. Liquidity providers (LPs) earn fees from leveraged trades, creating a “house vs. gambler” dynamic where LPs effectively bet against traders’ profitability. During periods of high market volatility and trading activity, this model delivers outsized returns for LPs.

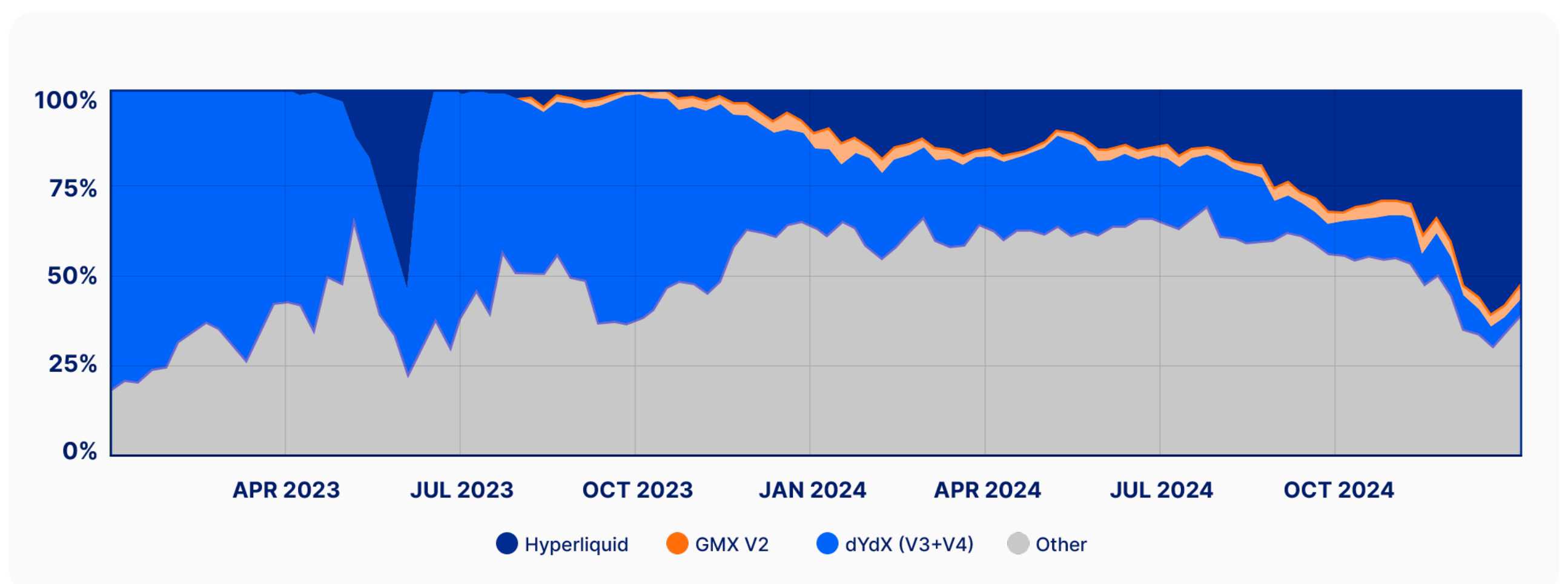
GRAPH 9 PERP DEXS MONTHLY TRADING VOLUME



Source: Exponential.fi, DeFiLlama, [The Block](#)

In 2024, perp DEX trading volumes surged to \$2.7 trillion, up 289% year-over-year, driven by increasing adoption of onchain trading. Hyperliquid emerged as a standout platform, capturing 56.5% of market share and processing over \$340 billion in December alone. Features like non-KYC trading, low latency, and a wide range of tradable assets have positioned perp DEXs as critical infrastructure for speculation and hedging in crypto markets.

GRAPH 10 PERP DEX MARKET SHARE



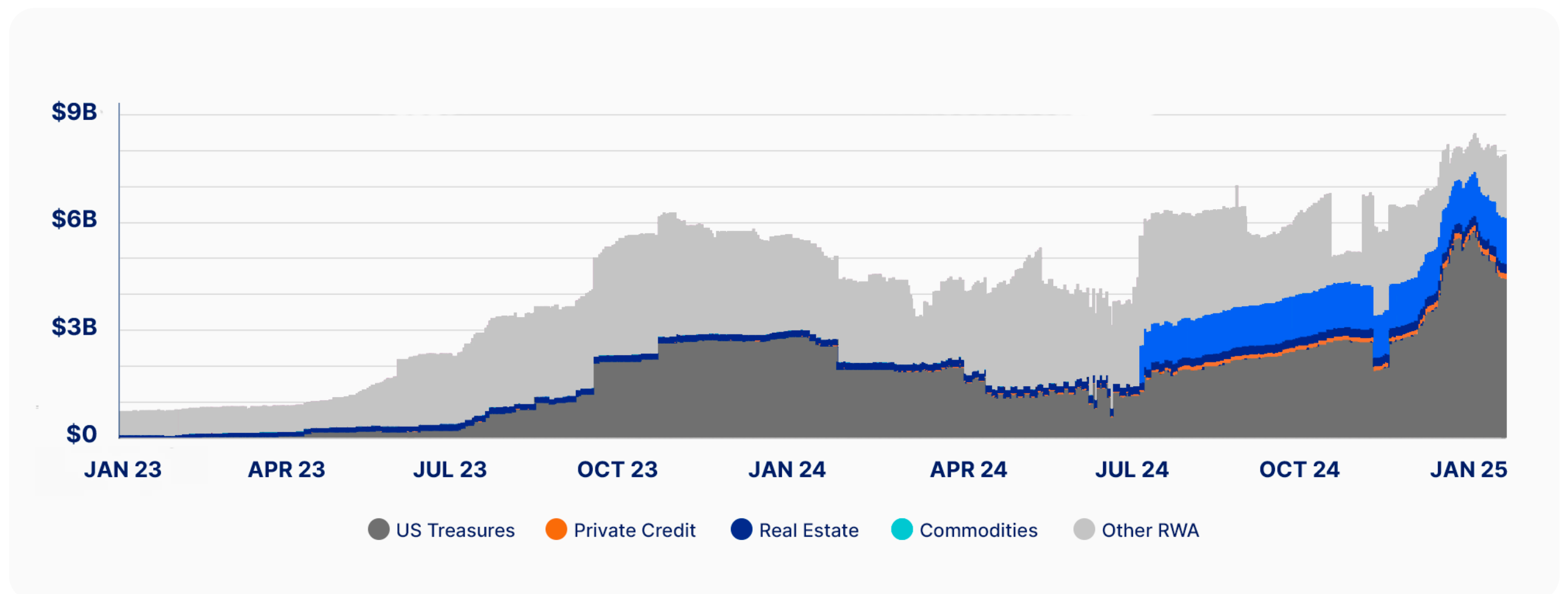
Source: Exponential.fi, [Dune Analytics](#)

While LPs face higher volatility in perp DEXs compared to traditional yield sources, their performance-based returns provide unique upside potential. This innovation is particularly compelling in market conditions where demand for leverage spikes, creating a scalable and flexible yield opportunity.

## Real-world assets: Yield with stability

RWAs bring a new dimension to DeFi, offering stable, predictable yields by tokenizing traditional financial instruments like treasuries, real estate, and private credit. Protocols like Ondo and Maker have pioneered this space by integrating RWA yields into DeFi. Ondo's stablecoins, OUSD and USDY, pass much of the earned interest back to token holders, distinguishing them from conventional stablecoins (USDT, USDC) that primarily benefit issuers. Similarly, Maker's expansion into real-world collateral, like treasuries and corporate debt, has increased the yield of its DAI savings product.

GRAPH 11 REAL-WORLD ASSET PROTOCOLS SURPASS \$8B TVL IN 2024



Source: DefiLlama

By tokenizing real-world instruments, RWAs mitigate the risks of speculative yield strategies while broadening DeFi's appeal to more risk-averse participants. This shift also diversifies DeFi's revenue streams, making the ecosystem less dependent on crypto-native trading and liquidity incentives.

However, the introduction of RWAs comes with risks. Unlike traditional DeFi mechanisms, which rely on self-executing smart contracts, RWAs depend on off-chain agreements, custodians, and regulators. These dependencies introduce counterparty risks, reliance on legal enforcement, and more centralization vectors, embedding vulnerabilities that challenge DeFi's foundational ethos.

In many ways, RWAs could become DeFi's "Trojan horse," bringing stability and growth but potentially introducing external risks that the ecosystem has worked hard to avoid. Addressing these concerns transparently and building robust frameworks will be crucial to ensuring RWAs strengthen DeFi rather than compromise it. With careful execution, RWAs can strike the right balance between leveraging real-world opportunities and preserving the trustless nature that defines decentralised finance.

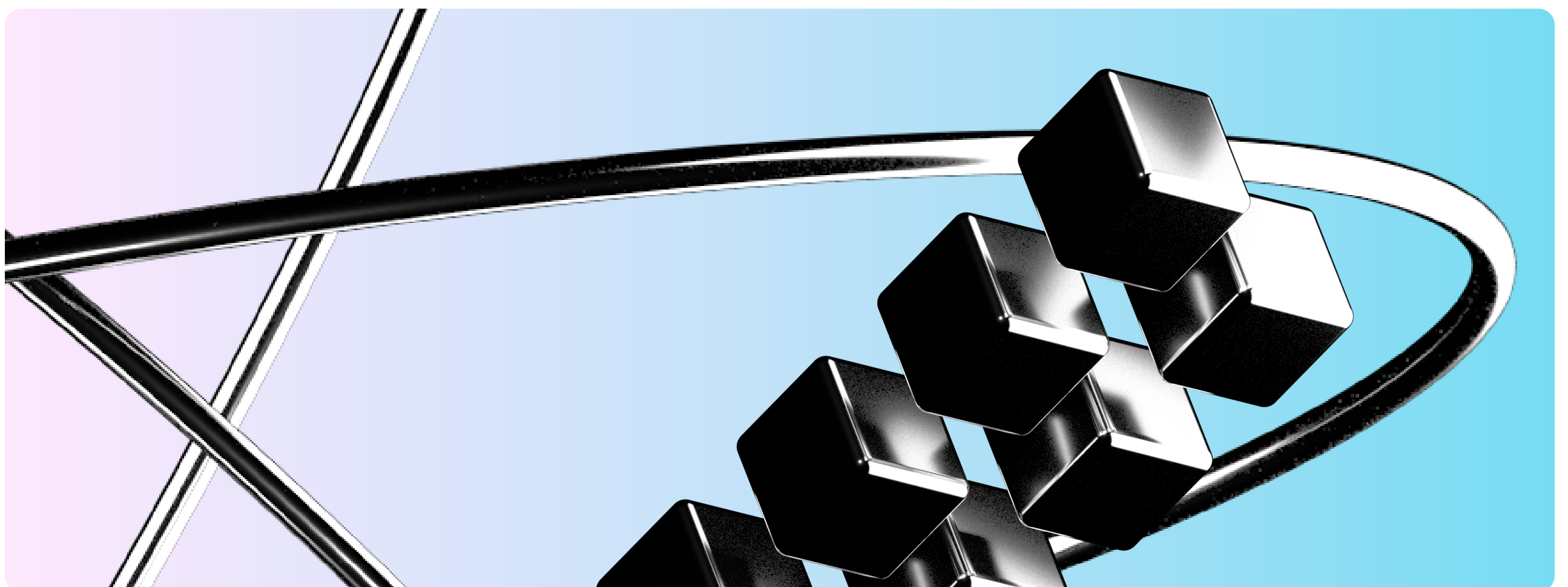


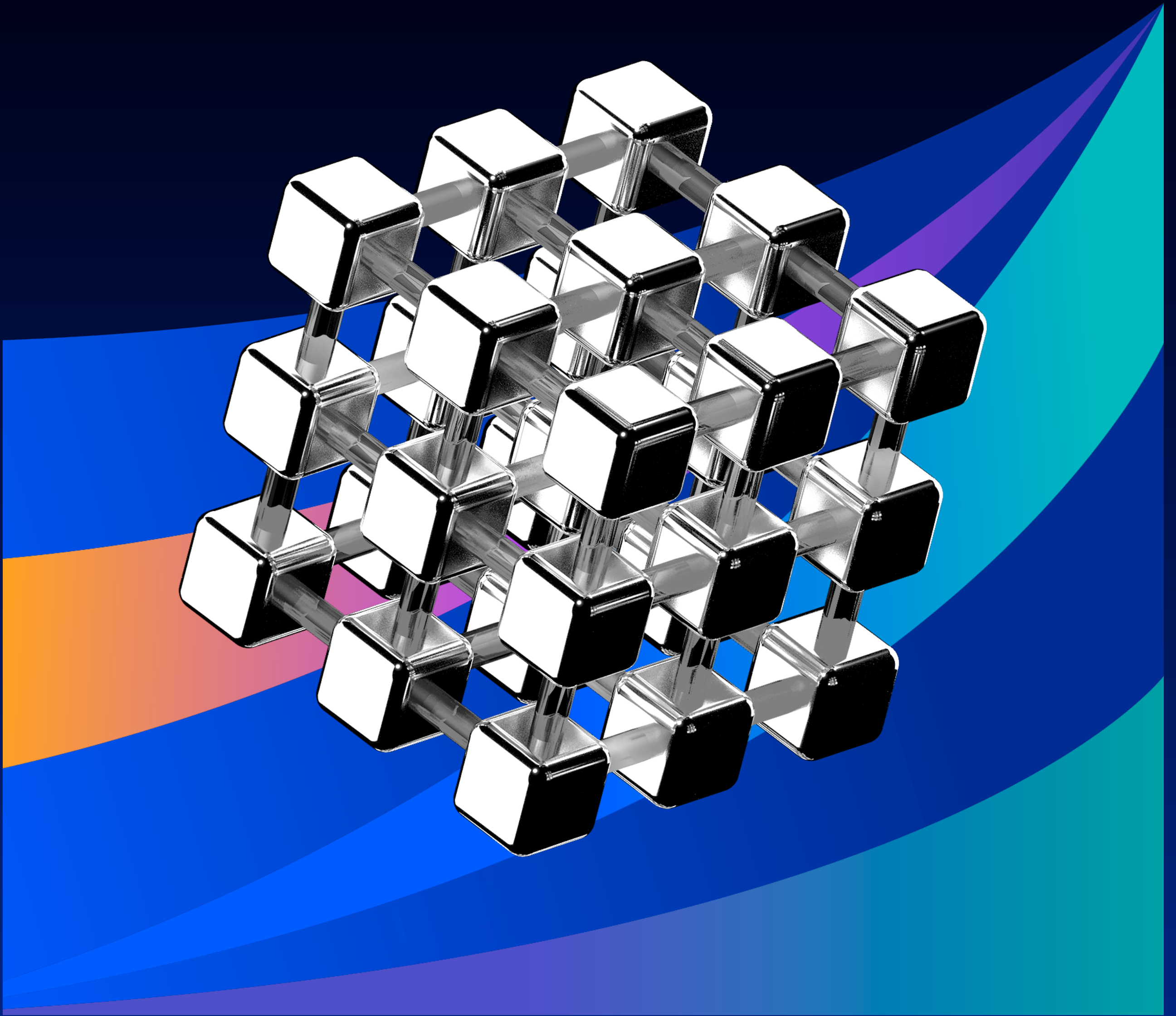
## Final Thoughts

As DeFi continues to mature, its adaptability and focus on sustainable yield generation are redefining the financial landscape. Innovations in staking, lending, market making, and bridging showcase the ecosystem's ability to evolve, addressing early challenges while unlocking new opportunities for growth.

While Vitalik Buterin's ouroboros analogy raises valid questions about yield sustainability, the data tells a different story. DeFi's increasing reliance on fee-based revenues, the integration of real-world assets, and the growing participation of institutional players highlight a sector that is not just surviving but thriving. These advancements signal that DeFi is well on its way to becoming a cornerstone of the global financial system.

The next phase of DeFi will be defined by its ability to scale innovation without compromising resilience. As the ecosystem continues to expand and refine its foundations, it is poised to achieve what traditional finance cannot — a more inclusive, transparent, and efficient financial future.





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