



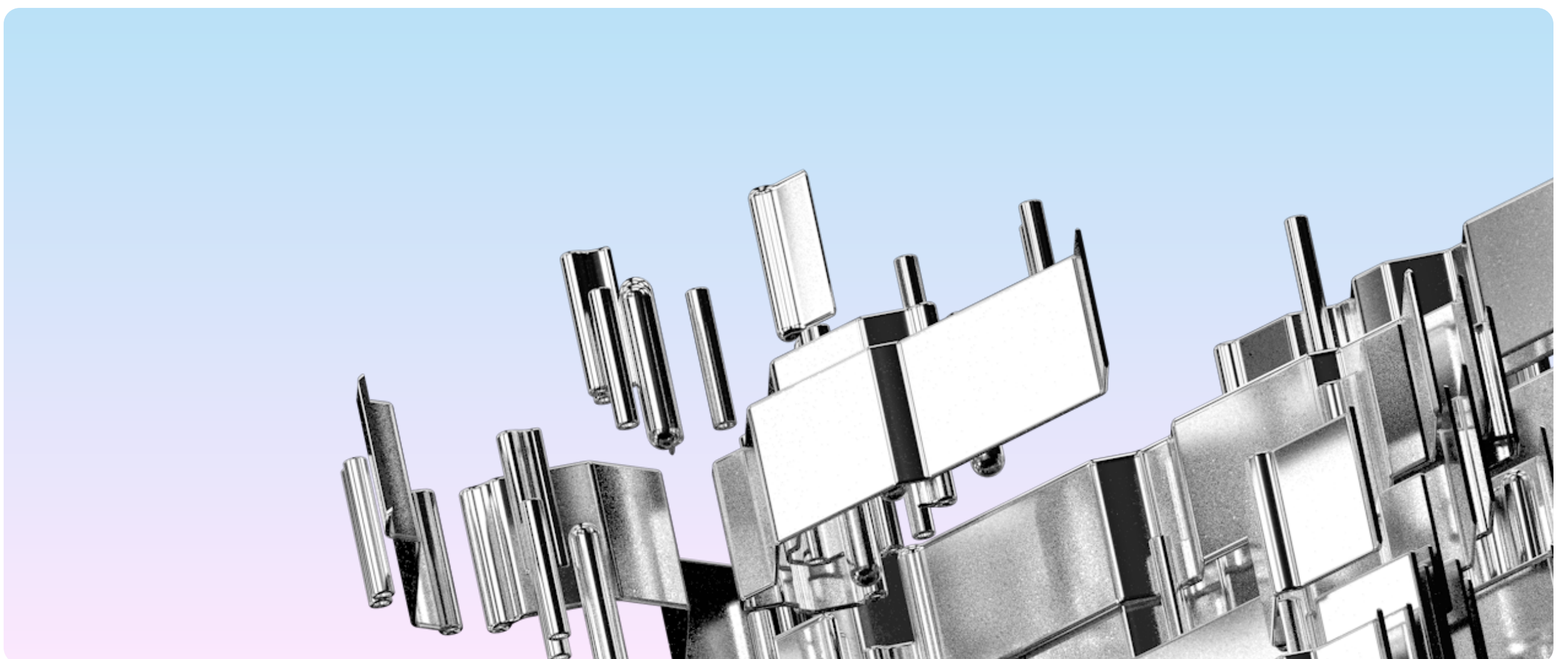
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# DeFi 3Q24 Report

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## Introduction

Through Q3 2024, the decentralised finance (DeFi) ecosystem experienced a turbulent journey. Anticipation was high for another 'DeFi Summer,' fueled by significant catalysts such as the fourth Bitcoin halving, the approval of spot ETFs for Bitcoin and Ethereum, and a surge in on-chain liquidity and yield opportunities. While the first half of the year met expectations — Bitcoin reached new all-time highs and a wave of airdrops reignited market enthusiasm — the latter half has been characterized by increased volatility and tempered growth. This report examines the events of the past quarter, highlighting DeFi's resilience in the face of these challenges and exploring what lies ahead for the industry.



# The Stress Test: DeFi's performance during the market meltdown

Following a strong first half with Bitcoin's rise to a new all-time high, financial markets faced their first test of volatility in early August 2024. A convergence of negative factors triggered sharp sell-offs across both equity and crypto markets. Rising unemployment data fueled recession fears, the unwinding of the yen carry trade added pressure, and escalating geopolitical tensions intensified market jitters. On August 5th, volatility reached extreme levels and erased nearly \$400 billion in value from the crypto market alone.

In the face of this turmoil, DeFi protocols not only survived but demonstrated remarkable resilience, functioning as intended without any major disruptions. This resilience underscores DeFi's antifragility — a system that grows stronger under stress and adapts to challenges, highlighting its potential to disrupt traditional finance (TradFi).

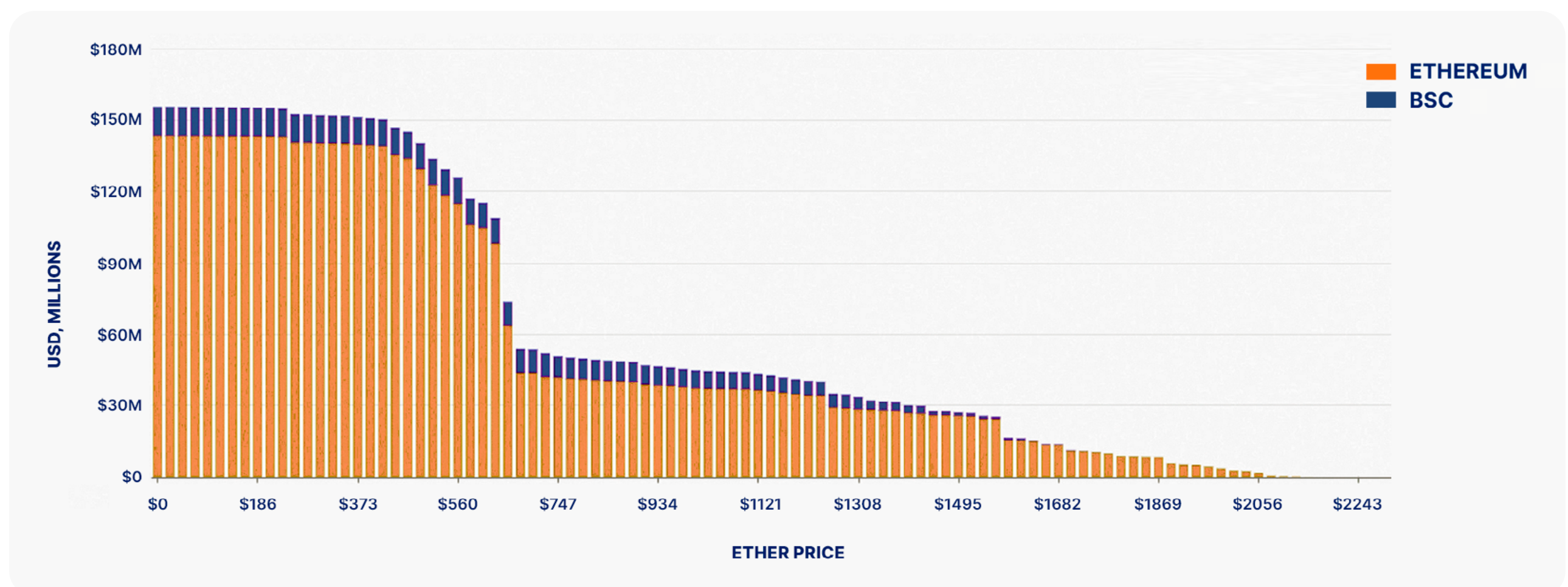
## Lending: Automated liquidations safeguarded lenders' principal

In DeFi, lending is enabled by *overcollateralization* and *decentralised liquidations*, mechanisms that protect lenders from bad debt or borrower defaults. To ensure repayment, borrowers must provide collateral worth more than the loan itself. If the borrower fails to repay, or if the value of their collateral falls below a certain threshold, the loan is liquidated. Unlike TradFi, where liquidations are handled through legal processes and trusted intermediaries, DeFi liquidations happen instantly and are executed by anonymous liquidators. These liquidators are incentivized to repay the loan in exchange for a profit, meaning liquidators swiftly and effectively prevent bad debt accumulation.

Liquidations are common in DeFi, especially during periods of high market volatility. During the global market meltdown in early August, the total crypto market cap shed 7%, wiping out \$162 billion in value. At the same time, over \$300 million in liquidations occurred across major DeFi lending platforms like Aave, Compound, and MakerDAO's Spark protocol. These protocols efficiently processed liquidations, preventing any significant accumulation of bad debt and generating significant revenues for their treasuries. In a single day, Aave alone processed \$237 million in liquidations, generating \$6 million in revenue.

Despite these actions protecting lenders' capital, liquidations can have significant downsides for borrowers. While liquidations are necessary to prevent bad debt, they can also negatively impact borrowers if collateral is prematurely liquidated. Liquidations often have a cascading effect on collateral prices, pushing prices lower during the sell-off, which in turn forces more liquidations. For instance, at an ETH price of around \$655, more than \$70 million worth of ETH collateral becomes liquidatable. If this price is breached, the resulting liquidations would add further selling pressure, pushing ETH prices down further and triggering additional rounds of liquidation. However, those prices can rebound sharply once the liquidations are complete. Thus, borrowers not only lose their collateral but may also need to buy it back at a higher price, compounding their losses.

GRAPH 1 CUMULATIVE ETH LIQUIDATIONS BY CHAIN



Source: DefiLlama

However, DeFi liquidation mechanisms are evolving to be more borrower-friendly. New protocols like Curve's LlamaLend, Fluid, and Euler V2 offer innovative approaches resulting in less disruptive liquidations.

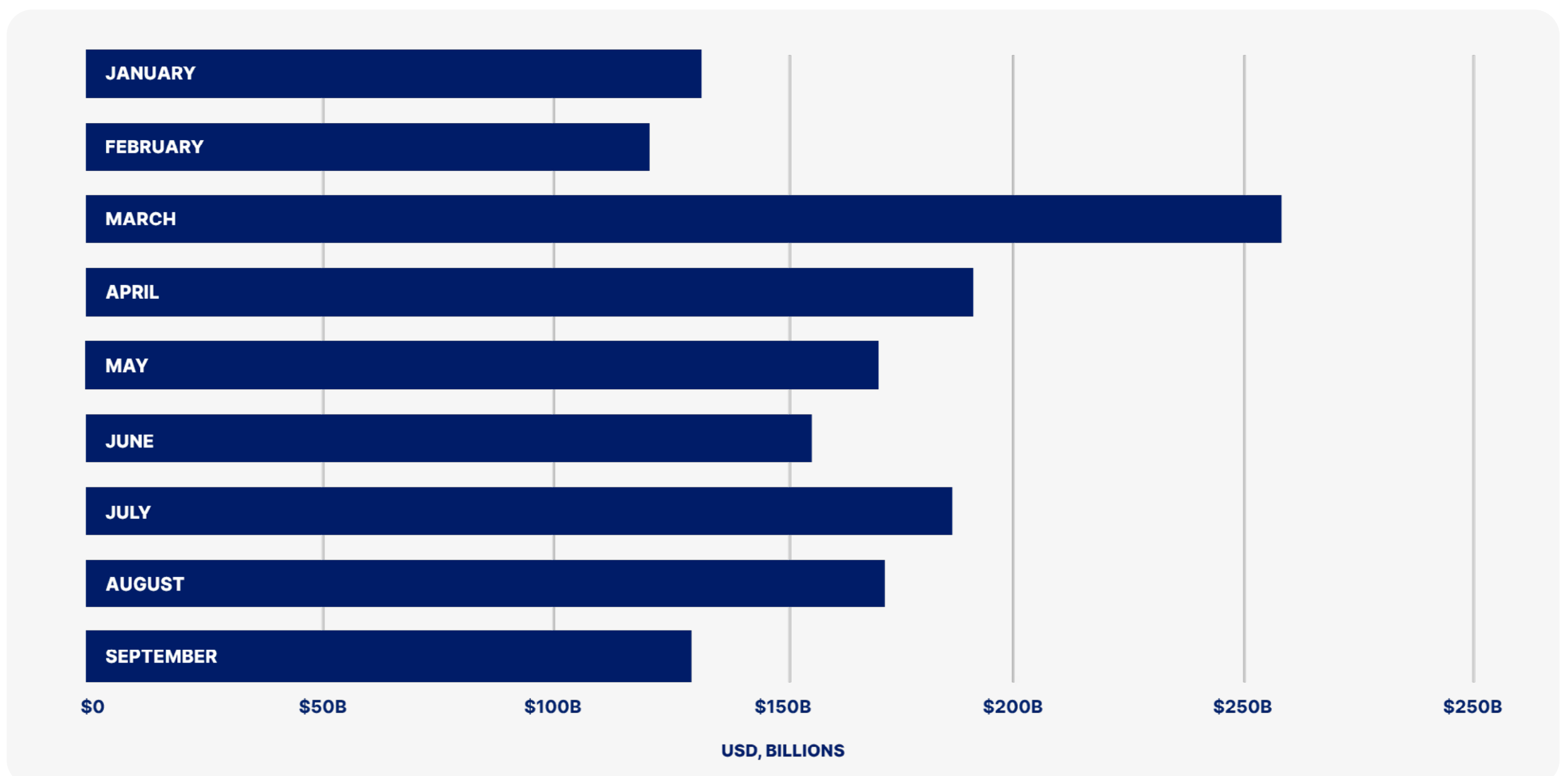
- Curve's LlamaLend employs soft liquidations, gradually converting a borrower's collateral into stablecoins rather than liquidating it all at once. This helps borrowers avoid sudden losses during market volatility.
- Euler V2 introduces a modular framework, with independent vaults for each asset, allowing for customized risk management and more efficient liquidation processes.
- Fluid adds another layer of innovation with its tick-based system, grouping users' collateral and debt into ranges to enable seamless liquidations across multiple users at once.

These advancements in liquidation mechanisms aim to minimize borrower disruption while maintaining the protection of lenders' principal. When lenders feel confident their capital is secure, they are more likely to supply liquidity. This increased liquidity further enhances the borrowing experience, as borrowers can access more funds, which drives higher utilization of the lent assets. Higher utilization leads to increased interest rates, ultimately benefiting liquidity providers (LPs) with improved yields. By continuously refining the experience for both lenders and borrowers, DeFi protocols can attract more capital, boost activity, and foster a healthier, more profitable ecosystem for all participants.

## Market Making: Price curves adjusted seamlessly, depegs corrected

Decentralised exchanges (DEXs) like Uniswap and Curve remained fully operational during the early August selloff, showing the resilience of the Automated Market Maker (AMM) model. AMMs allow for automatic trading of digital assets without the need for traditional order books, using mathematical formulas to adjust token prices based on the ratio of assets in the pool. Despite the increase in market volatility, DEXs experienced no downtime, and their AMM systems smoothly adjusted price curves to account for the rapidly changing market conditions.

GRAPH 2 TOTAL MONTHLY DECENTRALISED EXCHANGE VOLUME

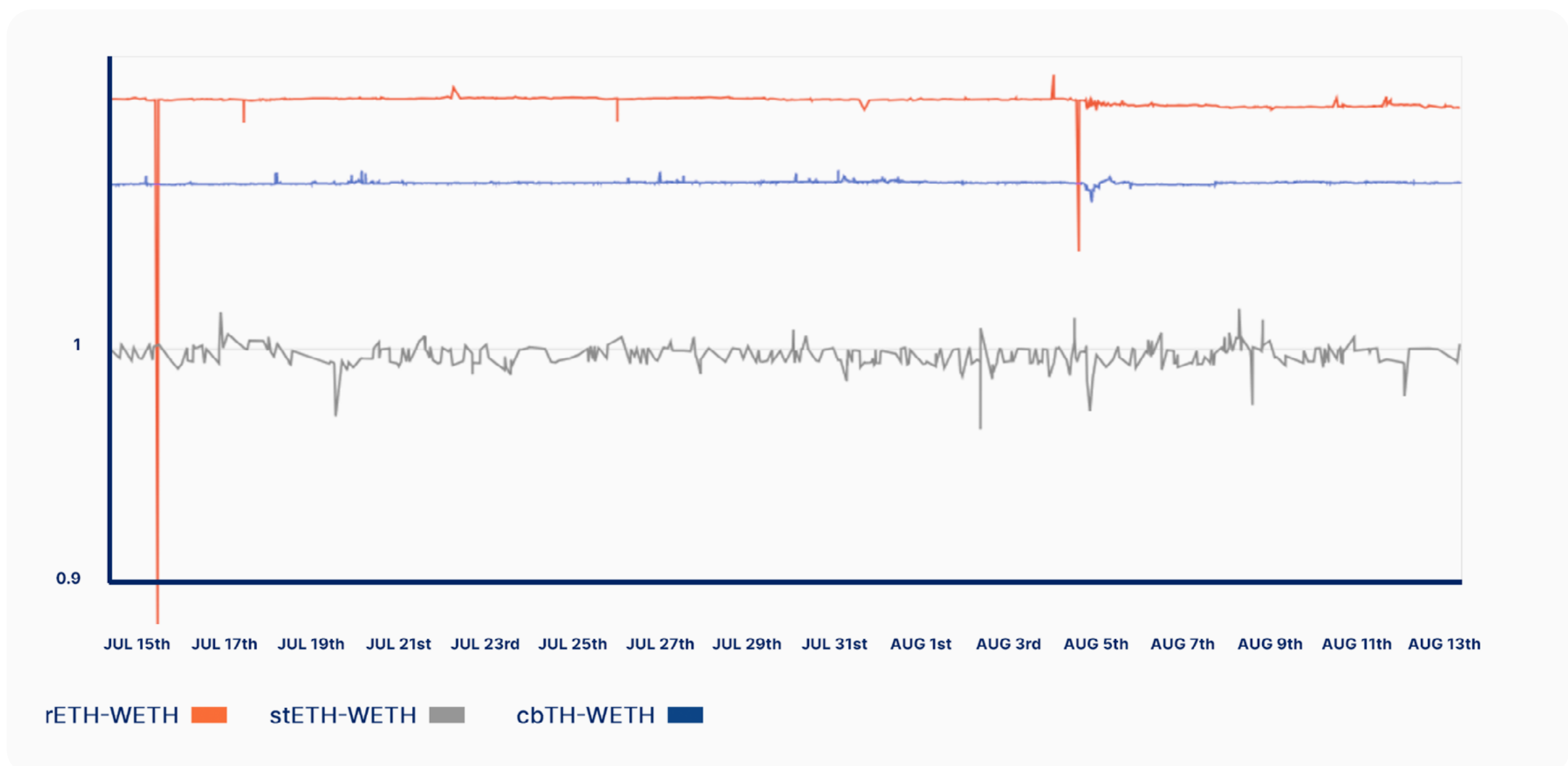


Source: DefiLlama

In periods of high volatility, certain assets can temporarily deviate from their pegged values, especially in cases of stablecoins or liquid staking tokens (LSTs). These deviations, or “depegs,” often occur because users cannot instantly redeem the tokens for their underlying assets or because redemption times are longer than desired. For example, Lido’s stETH, which is pegged 1:1 to ETH, can be redeemed for ETH, but only after waiting through an exit queue that lasts anywhere between 1-5 days. When stETH’s liquidity on DEXs is constrained, it can cause the token to trade below its peg on secondary markets.

However, these depegs are often minor and temporary, presenting arbitrage opportunities for sophisticated traders. On August 5th, several LSTs including stETH, rETH, and cbETH briefly traded at a discount to ETH on Uniswap as selling pressure increased. Yet, these depegs quickly corrected within a few hours, as arbitrageurs took advantage of the price discrepancy.

GRAPH 3 UNISWAP LST PEG STABILITY



Source: Dune.com

As an LP in one of these pools, you would have earned a higher yield from the increased trading volume. Recent innovations like concentrated *liquidity* and *dynamic* fees have further improved the experience for LPs during volatile periods. Concentrated liquidity, introduced in Uniswap V3, allows LPs to focus their liquidity within specific price ranges where trading is most active. This boosts capital efficiency, particularly in volatile events like in early August. However, concentrated liquidity in a narrower range can also increase the risk of impermanent loss (IL), as liquidity becomes inactive if the prices moves outside the designated range. This heightened risk makes it more critical that LPs earn higher fees to compensate for potential losses.

Currently, most pools on DEXs have a fixed fee structure, with different tiers depending on the type of asset (e.g. low fees for stablecoin pairs, high fees for more volatile assets). This static model limits the ability of LPs to adapt to changing market conditions. Dynamic fees, a new feature proposed in Uniswap V4, would have enabled LPs to benefit from the August volatility by automatically charging higher swap fees. This would allow LPs to capture more value, offsetting potential IL. During calmer periods, the fees would then lower, thus encouraging more trading activity. By optimizing returns across different market conditions, dynamic fees provide a more balanced experience for LPs.

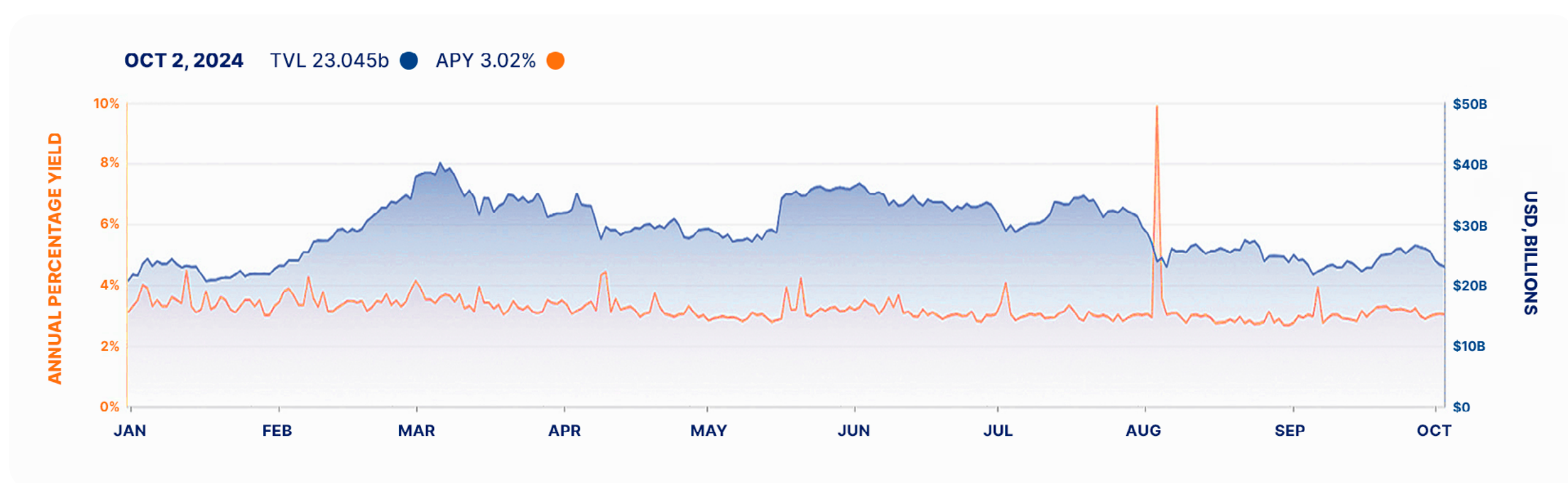
## Staking: Increased activity boosted fees and yields

On Ethereum and other Proof-of-Stake (PoS) networks, validators earn rewards by performing execution tasks like validating transactions and creating new blocks. These rewards are directly influenced by network activity, particularly the demand for block space. Validators earn additional fees (“tips”) when users want to expedite their transactions, as well as capture Maximal Extractable Value (MEV) opportunities, a growing trend in staking. MEV refers to profits extracted by reordering, including, or excluding transactions within a block. Searchers—bots that identify and exploit these opportunities—share MEV with validators. Some common MEV strategies include:

- **Frontrunning:** Identifying a profitable trade before execution and submitting an order first with a higher gas fee.
- **Arbitrage:** Exploiting price differences between DEXs to profit from quick trades. If two DEXs list the same token at different prices, searchers can buy the cheaper one and sell it on the other DEX.
- **Liquidation:** Claiming liquidation fees from borrowers whose collateral value fluctuates, forcing a sell-off to repay lenders.

Staking rewards increase in direct proportion to network activity—the more transactions, the greater the fees and MEV rewards. This was evident in early August when market volatility surged, driving up on-chain activity. On Ethereum, gas fees briefly spiked to over 50 gwei (approximately \$0.85) from the average baseline of 7 gwei (roughly \$0.12). This increase in gas fees translated directly into higher yields for stakers as validators captured more fees, reinforcing staking’s role as a foundational yield-generating mechanism within DeFi.

GRAPH 4 STETH TOTAL VALUE LOCKED AND ANNUAL PERCENTAGE YIELD



Source: DefiLlama

Despite the market turbulence, staking protocols like Lido — Ethereum’s largest liquid staking platform — remained stable. Even though there was a brief spike of around 65,000 ETH withdrawals on August 5th, this was within the normal historical range and did not indicate a loss of confidence in staking. The resilience of these platforms, along with the consistent yields, highlights the growing confidence users have in staking as a secure and valuable way to participate in DeFi.

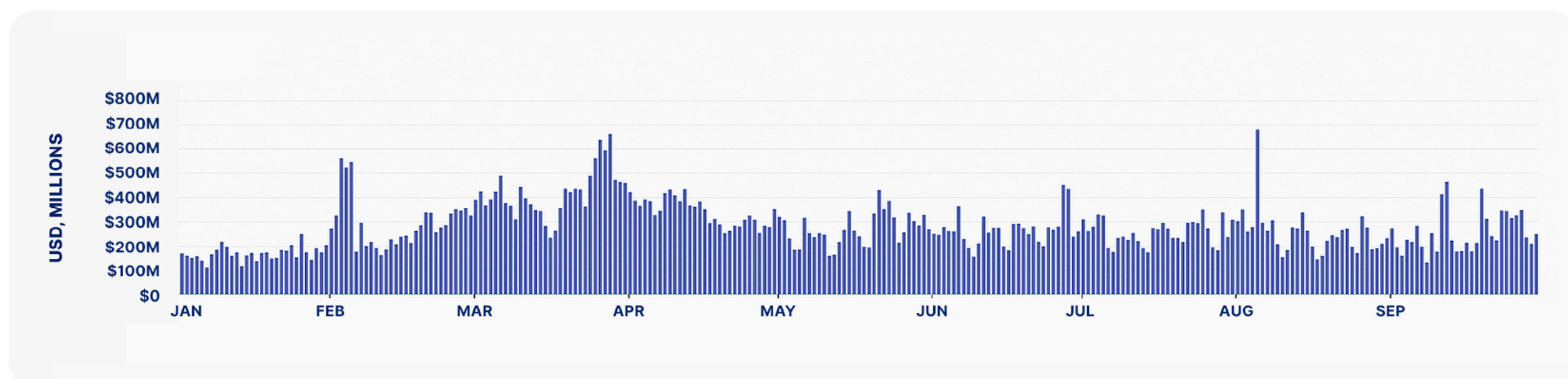
Moreover, ETH staking yields serve as a baseline for yield across DeFi. For example, lending rates are benchmarked against staking yield in DeFi. Since lending involves additional risks, DeFi protocols typically offer higher rates than staking to remain competitive. If lending rates drop lower, investors could borrow from DeFi apps, stake the borrowed funds, and profit from the yield difference. This dynamic helps anchor lending rates in DeFi and provides a floor for yields across the broader ecosystem.

## Bridging: Cross-chain liquidity remained robust

Cross-chain bridges—essential infrastructure for enabling the transfer of assets across different blockchain networks—operated smoothly despite the market stress. Bridges like Across and Stargate, two of the leading protocols in the space, continued to facilitate high volumes of asset transfers without liquidity shortages or significant delays, ensuring that users could move their funds freely and efficiently.

Bridging volume spiked to \$678 million on August 5th, according to DefiLlama, as users and arbitrageurs moved assets across chains to capitalize on price discrepancies and liquidity opportunities. This spike in activity was driven by the need to reposition assets during the market turbulence. The ability of bridges to handle this sudden influx of activity without disruption speaks to their growing robustness and importance within the broader DeFi ecosystem.

GRAPH 5 TOTAL BRIDGE VOLUME



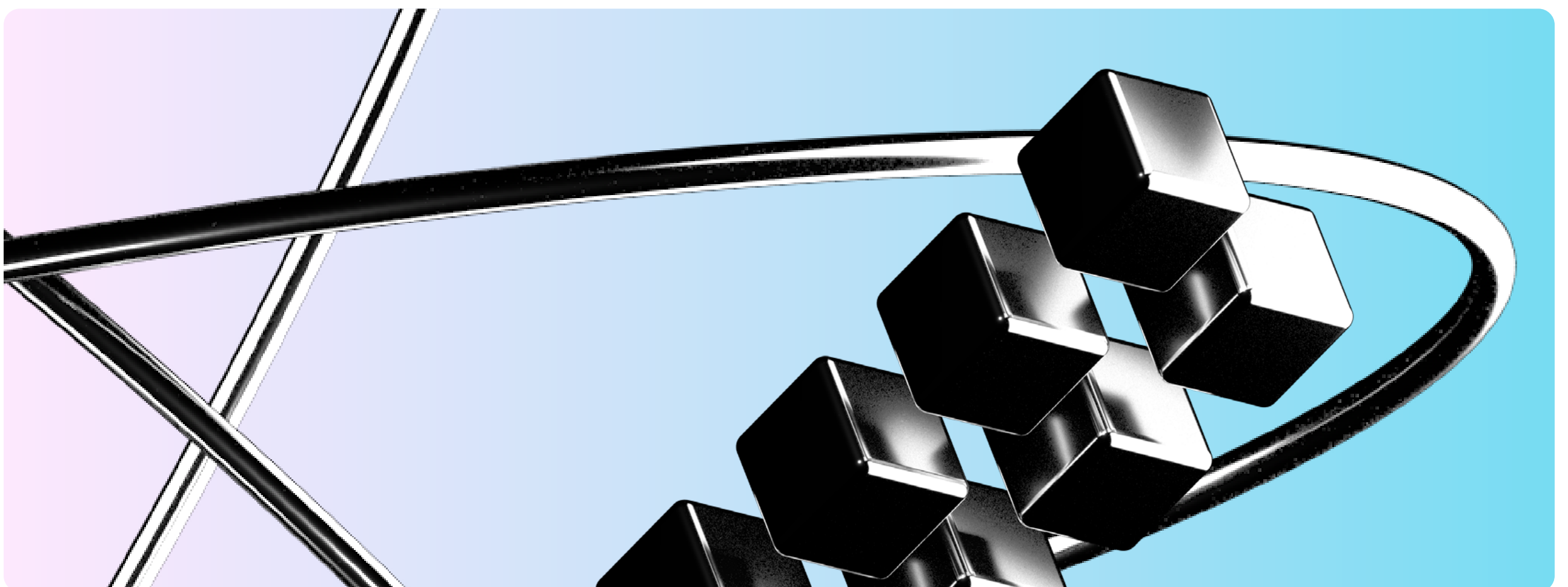
Source: DefiLlama

One of the biggest challenges of cross-chain bridges is maintaining liquidity across multiple networks simultaneously. During times of high market activity, liquidity shortages can happen on one side of the bridge, causing delays or even failures in moving assets. However, recent innovations have helped solve this issue:

- Across uses a *unified liquidity pool* on Ethereum's main network. Instead of needing separate pools of assets for each blockchain, Across keeps most of its liquidity in one place and only moves funds to other networks when needed. This allows Across to react quickly and send liquidity to where it's needed most, preventing shortages and keeping fees low.

- Stargate's V2 protocol introduces a new system that dynamically moves liquidity where it's needed using an AI-driven tool called the AI Planning Module (AIPM). AIPM constantly monitors the liquidity on each network and adjusts fees and rewards to incentivize balanced liquidity across chains.

In the long run, as DeFi continues to evolve and more Layer 2 solutions and alternative Layer 1 chains emerge, the role of cross-chain bridges will only become more critical. Ensuring that liquidity flows freely across chains, regardless of market conditions, is essential to maintaining the efficiency and interconnectedness of the DeFi ecosystem.



# Restaking, airdrops, and the elusive DeFi summer

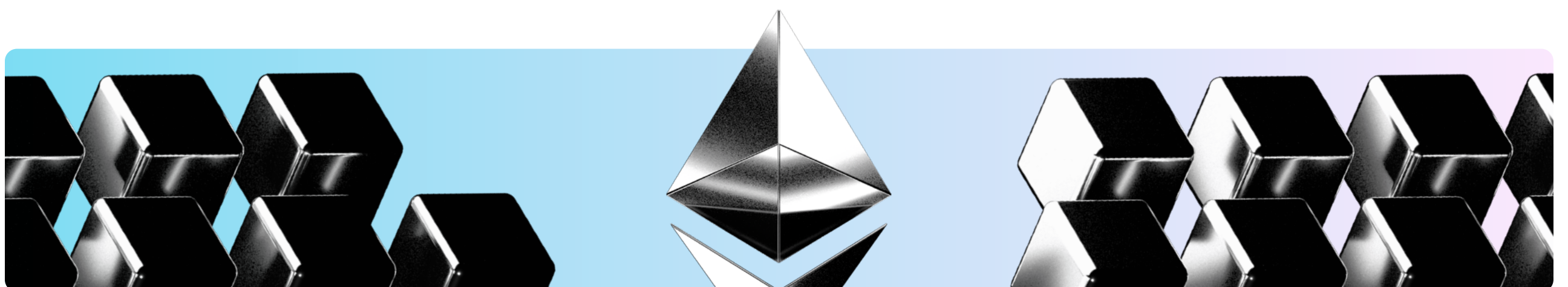
As 2024 began, the DeFi community was filled with optimism for a new wave of growth, driven by key events such as the fourth Bitcoin halving, the approval of spot ETFs for Bitcoin and Ethereum, and the Ethereum Dencun upgrade. These milestones, coupled with a surge in global crypto market capitalization, fueled hopes for a resurgence echoing the DeFi Summer of 2020. Yet, despite the emergence of new protocols, the much-anticipated DeFi revival akin to that of 2020 remained out of reach. Instead, innovations like restaking and point-based rewards defined the landscape, setting the foundation for a potential resurgence as market dynamics continue to shift.

## The Emergence of Restaking

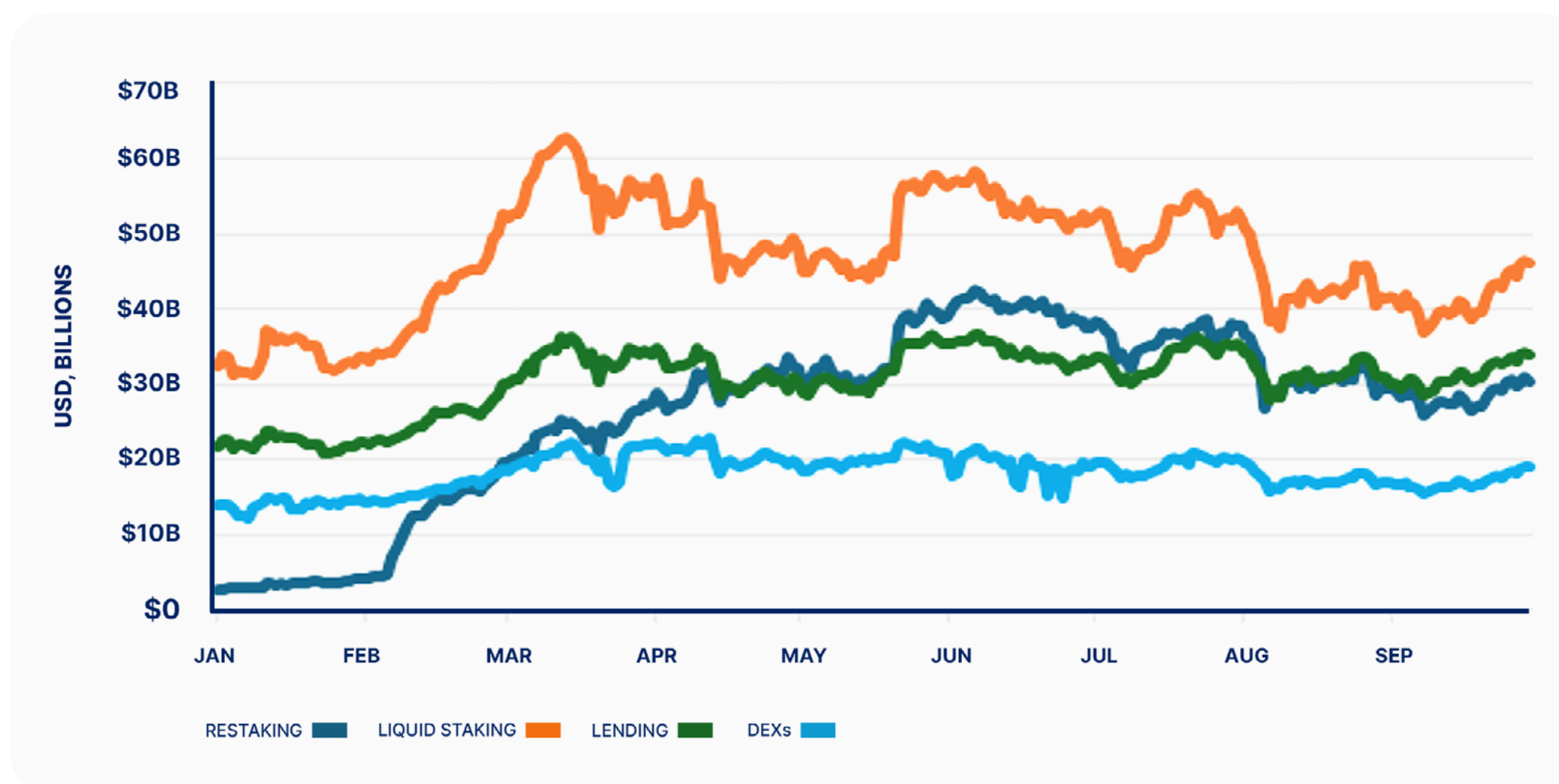
The introduction of restaking has been one of the most significant innovations within the Ethereum ecosystem in recent years. Pioneered by Eigenlayer, restaking allows users to use staked ETH to secure additional protocols known as Active Validation Services (AVSs). This mechanism has now expanded beyond ETH, enabling almost any asset to be restaked, further diversifying yield opportunities across the DeFi landscape.

Restaking unlocks a new layer of yield generation. By leveraging staked assets, users can earn yields across multiple protocols simultaneously, enhancing capital efficiency. Moreover, it opens the door for protocols to experiment with new forms of validation and consensus models, creating more robust and diverse decentralised networks.

Participants flocked to capitalize on the speculative opportunities provided by restaking. It quickly became the third-largest sector in crypto, trailing only lending platforms and decentralised exchanges in terms of Total Value Locked, a testament to the strong investor demand. The sector's current TVL sits at \$15 billion, down from its Q2 high of \$21.1 billion, but still representing a significant share of the crypto ecosystem.



GRAPH 6 DEFI SECTORS BY TOTAL VALUE LOCKED



Source: DefiLlama

Protocols like Pendle and leverage farming platforms such as Gearbox and Fluid have greatly benefited from the downstream effects of the intense demand for points within restaking protocols. During the first season of EigenLayer's airdrop, both Pendle and Gearbox reached their TVL peaks in April and June, respectively. This demand for points created favorable conditions for lenders, particularly those supplying ETH or stablecoins, as farmers competed for liquidity to maximize their airdrop rewards. As a result, many of these liquidity providers were able to secure double-digit yields during this period.

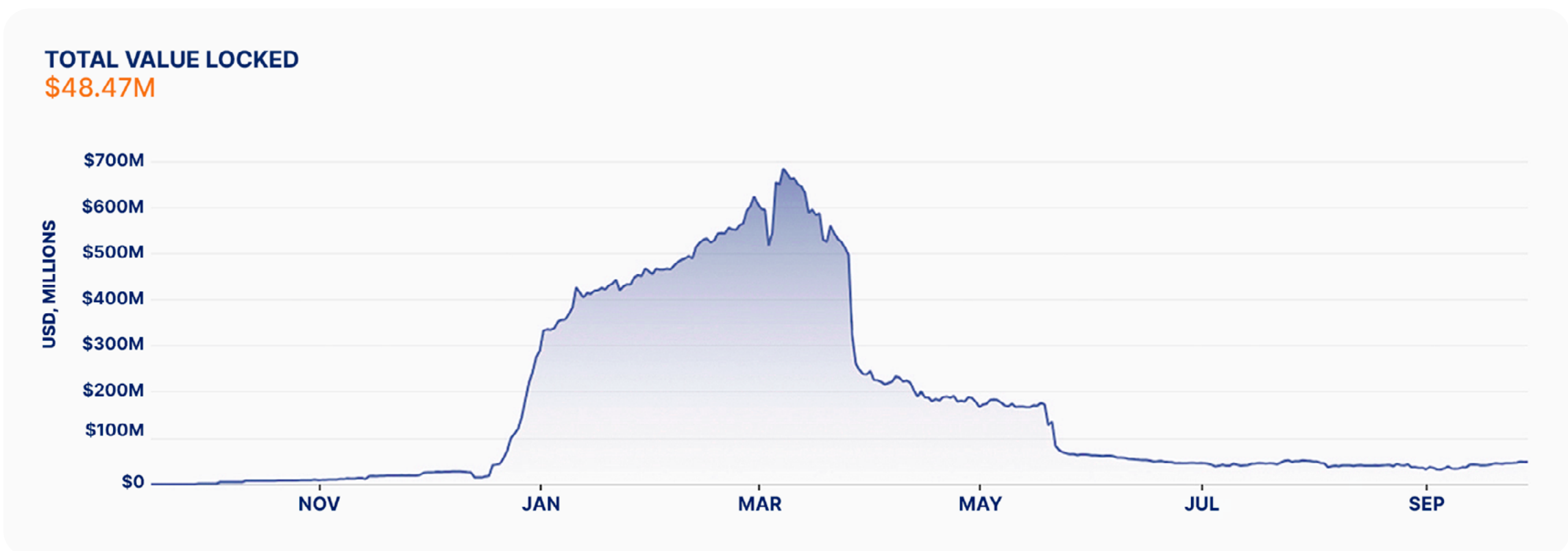
However, the landscape has shifted. The second season of EigenLayer's airdrop has now concluded, with EIGEN token transferability set to go live on October 1. As the initial frenzy around point farming subsides, these protocols may continue to see a decline in TVL. This reflects a decrease in the overall demand for point-based strategies. Nonetheless, there is potential for new trends to emerge, particularly as Bitcoin Layer 2 restaking gains traction, possibly reigniting interest in point farming and providing fresh opportunities for these protocols to recover.

## Airdrop Oversaturation

In 2024, the structure of airdrops shifted dramatically. Inspired by the success of restaking protocol point programs, many new protocols, including Parcl, Manta, and Blast, adopted a similar approach. While these point-based incentives were initially effective at driving TVL, they struggled with retention — users were quick to move funds elsewhere once rewards dried up.

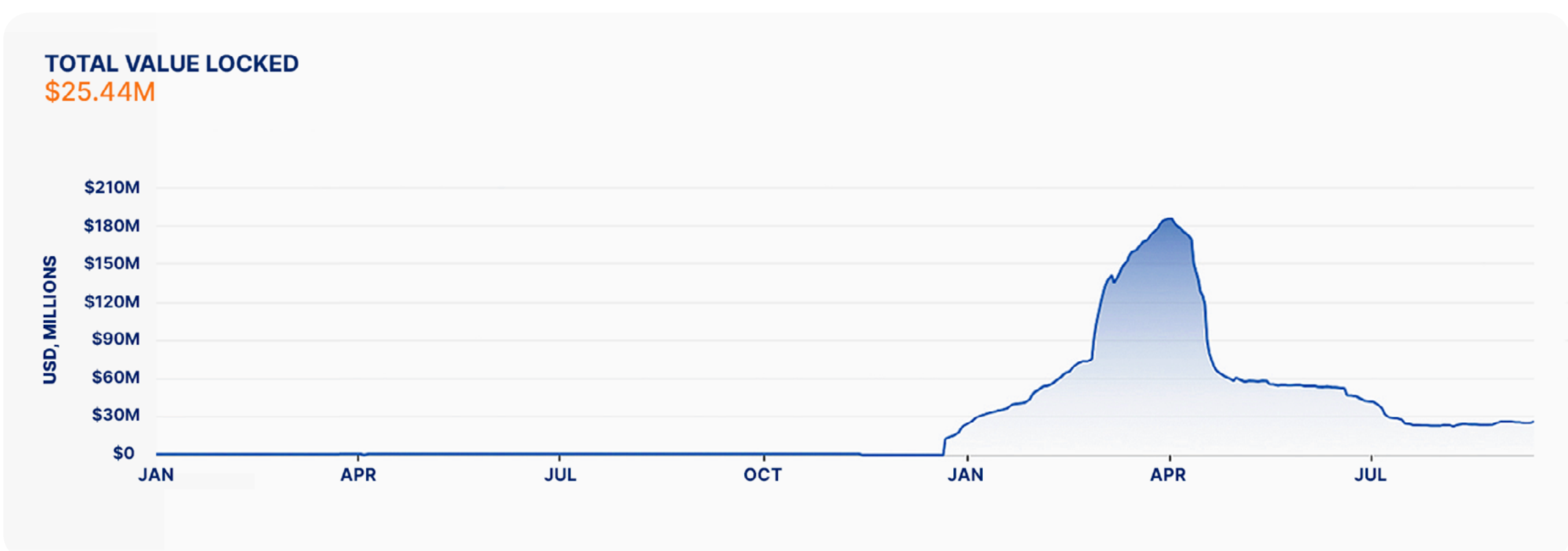
One of the key issues with the point systems was the ambiguity surrounding the actual yields earned, making it difficult for sustainable flywheels to emerge. In 2024 alone, over 60 airdrops were distributed, leading to investor exhaustion and increasingly mercenary behavior, as farmers sought to capitalize on as many opportunities as possible. This oversaturation diluted the effectiveness of airdrops, as users prioritized short-term rewards over long-term engagement.

GRAPH 7 MANTA PACIFIC TOTAL VALUE LOCKED



Source: DefiLlama

GRAPH 8 PARCL TOTAL VALUE LOCKED



Source: DefiLlama

Moreover, many of the tokens distributed through these airdrops had low floats, meaning only a small portion of the total supply was available in the market. TIA exemplifies the resulting extreme volatility, as initial market excitement quickly evaporated and prices crashed. This pattern of rapid adoption followed by sharp sell-offs became all too common in 2024, as data from Manta and Parcl demonstrates. This underscores how users chased rewards rather than built lasting relationships with these protocols.

## The Unfulfilled Promise of DeFi Summer and Prospects for Resurgence

The much-anticipated DeFi Summer 2.0 never quite materialized. A combination of macro and regulatory challenges — rising TradFi interest rates and ongoing uncertainty surrounding crypto regulations — stifled the sector's growth. Additionally, mercenary tendencies within the user base made it difficult for most DeFi platforms to build and retain loyal participants, as users jumped from protocol to protocol chasing the highest yields.

Interest in DeFi also shifted to other sectors within the crypto space. Memecoins and NFT trading dominated the narrative in 2024, capturing much of the community's attention. Unlike in 2020, when DeFi protocols were the main experimentation ground, the focus shifted to the 'fun' of pump-and-dump trading in memecoins, leaving DeFi struggling to regain its former momentum. This is epitomized by Pump.Fun, a memecoin launchpad, generating over \$100m in revenue in 2024 alone.

Despite these challenges, the prospects for a future DeFi resurgence are looking brighter. The growth of stablecoins is another key factor driving DeFi's resurgence. New entrants like Ethena and PayPal have gained rapid adoption, while established players such as Circle and Tether continue to expand their market share. With more stablecoins circulating, DeFi protocols are likely to benefit from increased liquidity, which should drive growth across the sector. Liquidity begets growth, and as liquidity deepens, the entire DeFi ecosystem stands to gain.

Additionally, the macroeconomic environment is becoming more favorable, with US interest rates beginning to decline, and both US presidential candidates showing openness toward crypto. As DeFi rates are likely to overtake TradFi yields, the sector could see a resurgence in activity.

Looking ahead, DeFi v2 could herald the next wave of innovation. Improvements in user experience (UX), chain abstraction, and the development of new DeFi primitives are critical to this evolution. Leading protocols like Aave and Uniswap are solidifying their dominance through potential fee switches. Emerging projects such as Llamalend, Pendle, EigenLayer, and Liquity v2 are pushing the boundaries of decentralised finance. As the sector continues to mature, DeFi is evolving toward more secure, scalable, and user-friendly solutions, positioning itself for a potential comeback.

# Rise of New Titans

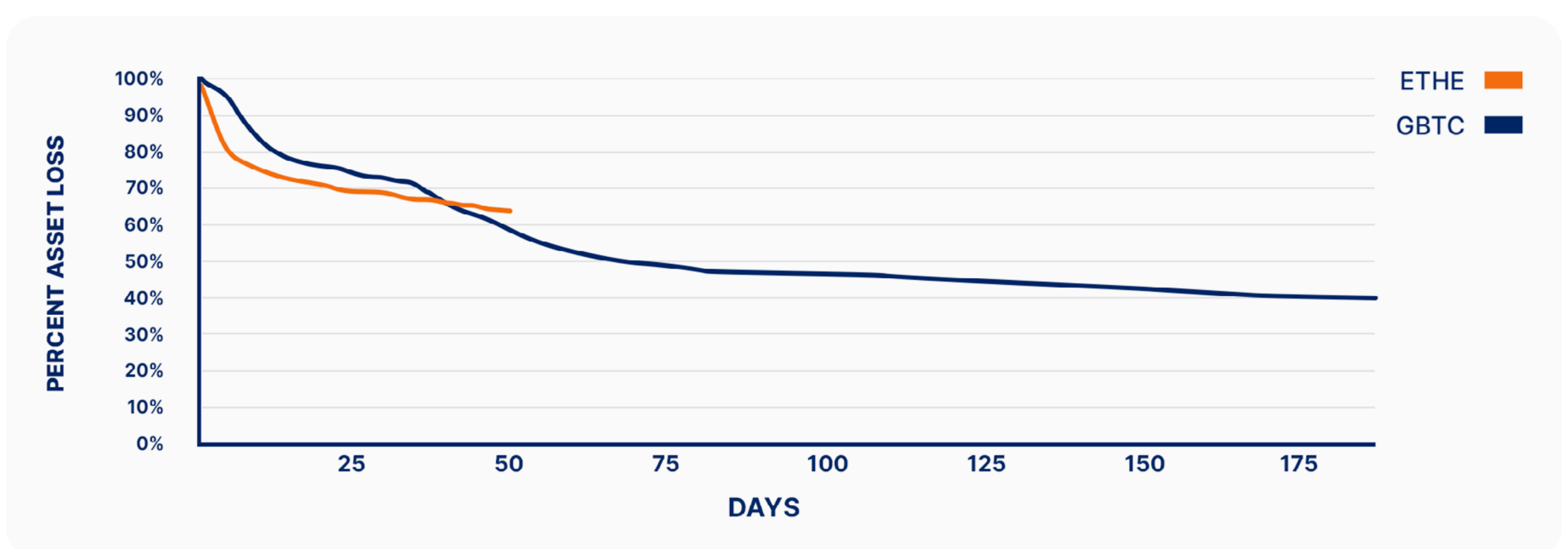
The maturation of the DeFi ecosystem has attracted significant interest from traditional financial institutions, signaling a new phase of integration between decentralised finance and mainstream financial markets. In 2024, this convergence has become more pronounced, with industry titans like BlackRock, Fidelity, and Franklin Templeton embracing cryptocurrencies through various avenues.

## Embrace of Spot ETFs

The approval and launch of spot ETFs for Bitcoin and Ethereum has been a landmark development. Since their debut in January, Bitcoin ETFs have attracted over \$18.3 billion in inflows, signaling robust investor demand. By contrast, Ethereum ETFs, which launched in July, initially saw nearly \$600 million in outflows, largely driven by investor exits from the Grayscale Ethereum ETF.

The substantial outflows from the Grayscale Ethereum ETF, most pronounced during the first week of the Ethereum spot ETF launch, experienced daily outflows exceeding \$100 million. These outflows were largely linked to a well-known arbitrage trade that had developed in the months leading up to the ETF's approval. Grayscale's Ethereum Trust (ETHE) shares, like its Bitcoin counterpart (GBTC), traded at a discount to the value of the underlying Ethereum. Investors capitalized on this discount by buying ETHE shares and betting on the launch of spot ETFs to close the gap between the market price of ETHE and the value of the Ethereum it represented.

GRAPH 9 ASSET LOSS SINCE ETF CONVERSION



Source: Farside Investors

As expected, the launch of spot ETFs spurred rapid exits from ETHE, allowing investors to capture profits from the arbitrage trade. However, after this initial period of repositioning, outflows slowed considerably. By late September, Ethereum ETFs as a whole recorded strong inflows, with three out of the top six inflow days occurring in the last week of the month. Bitcoin ETFs also saw a resurgence in September, with over \$1.2 billion in inflows, following a quieter August when they experienced \$100 million in outflows.

Some of the largest holders of Bitcoin Spot ETFs include Goldman Sachs, which holds approximately \$418 million across various ETFs, including nearly \$238 million in iShares Bitcoin Trust, and Morgan Stanley, with \$188 million in the same ETF. Hedge funds such as Hunting Hill Global Capital and Millennium Management also hold significant positions, with the latter managing \$1.15 billion in Bitcoin ETFs as of June 30, 2024.

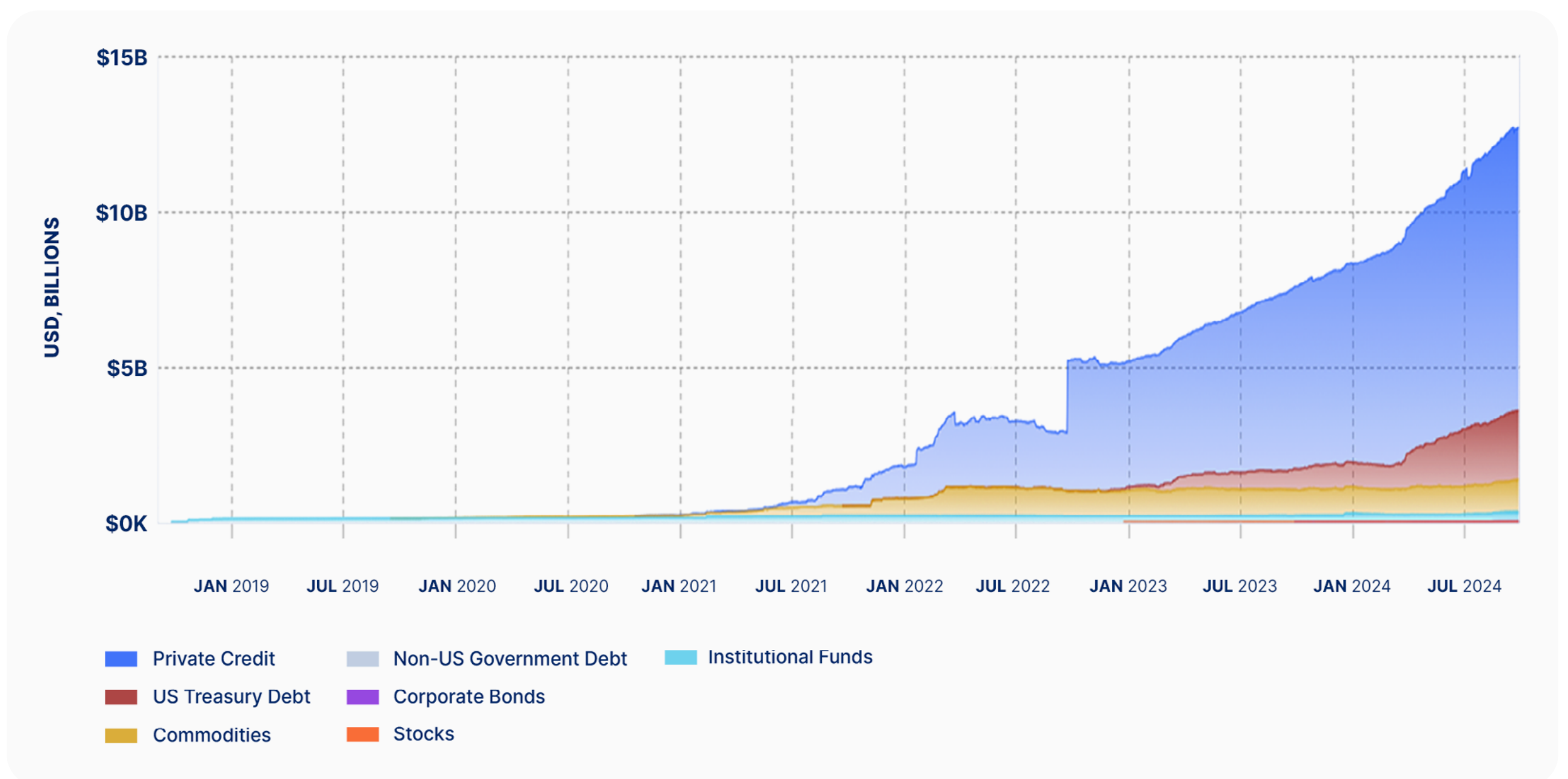
The introduction of these ETFs offers traditional investors regulated and familiar investment vehicles to gain exposure to cryptocurrencies. Among 430 ETFs launched this year, the top four in overall inflows are Bitcoin ETFs, while BlackRock's Ethereum ETF ranks seventh. This influx of institutional capital brings increased liquidity and could contribute to market stabilization.



## Tokenization of Traditional Assets

Beyond ETFs, traditional financial giants are extensively exploring asset tokenization on public blockchains. As of September 26, the total value of real-world assets (RWAs) on blockchain networks has surpassed \$12.7 billion. This growth is led predominantly by private credit products, which account for over \$9.1 billion of the tokenized value. Following closely are US Treasury Debt and Commodities, which have seen more than \$2.2 billion and \$1 billion tokenized, respectively. This marks a staggering increase of over 50% in total RWA value since the beginning of the year and more than a 250% rise from its peak in 2022.

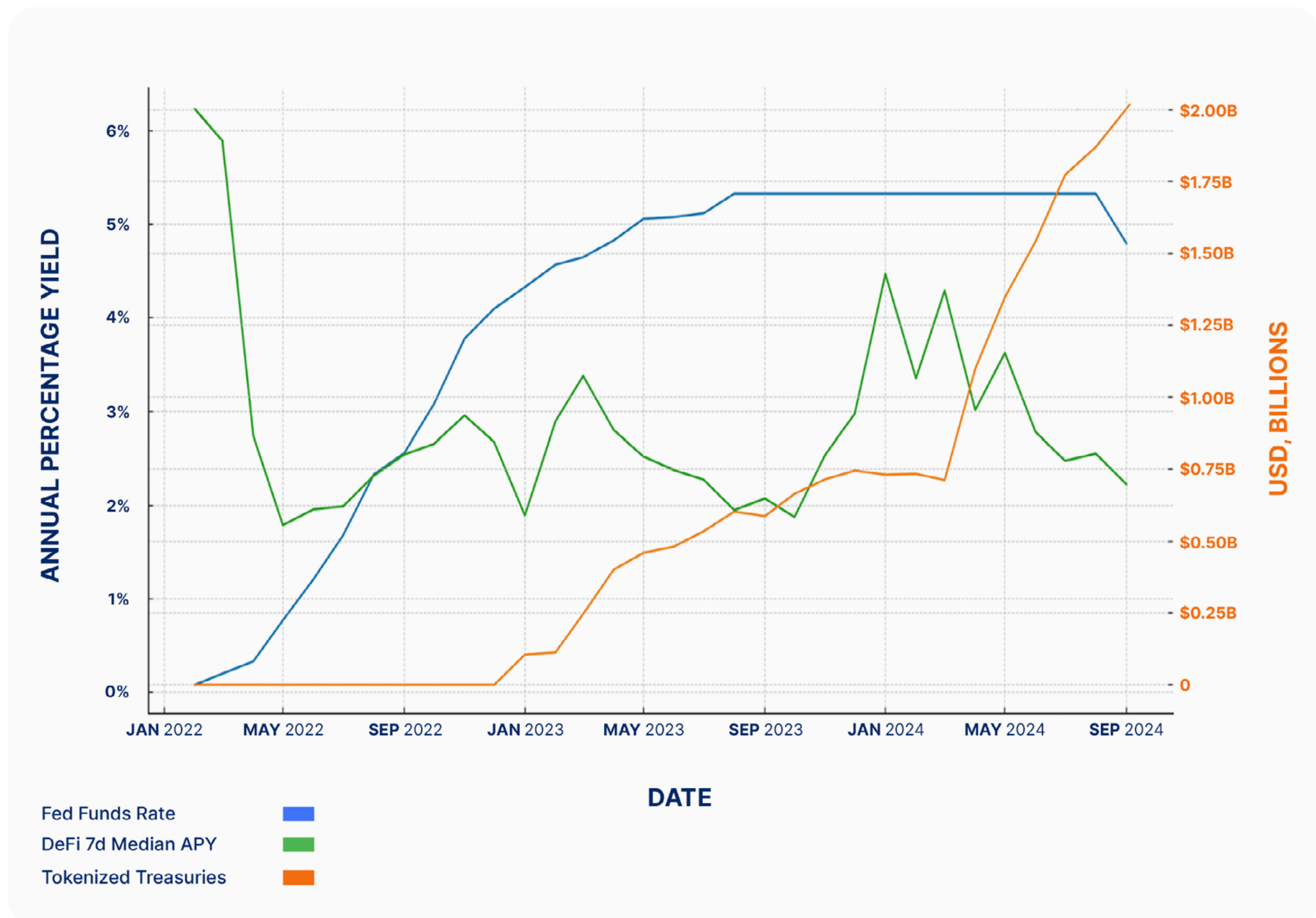
GRAPH 10 TOTAL VALUE OF TOKENIZED REAL-WORLD ASSETS



Source: RWA.xyz

The surge in tokenized US Treasuries, bonds, and cash-equivalents has unsurprisingly mirrored the rise in interest rates in the US. As the Federal Funds Rate climbed from near zero in March 2022 to a peak of 5.3% by August 2023, so too did the demand for tokenized treasury products. With higher yields suddenly available, it became logical for investors to seek out tokenized versions of these traditionally safe assets. The increase in tokenized US Treasuries during this period was less a complex market dynamic and more a simple response to the availability of this yield, which had previously been absent when rates were near zero.

GRAPH 11 TRENDS IN INTEREST RATES, DEFI YIELDS, AND TOKENIZED TREASURIES OVER TIME



Source: DefiLlama and Board of Governors of the Federal Reserve System

As the Federal Funds Rate begins to fall, there may be a natural tapering of this trend. Without the same level of yield incentives, demand for tokenized treasury products may decrease, just as it grew when rates were rising. Rather than overanalyzing the correlation, it's clear that the relationship between interest rates and tokenized treasury products follows an almost obvious pattern — higher rates attract more interest, while lower rates reduce the appeal.

Overall, the sector of RWAs — including private credit, US treasuries, commodities, institutional funds, non-USD government debt, corporate bonds, stocks, and real estate — is expected to continue its expansion. Large players are increasingly venturing into this field. Wall Street giant Guggenheim has tokenized \$20 million of commercial paper on Ethereum, and WisdomTree has launched a RWA tokenization platform on Ethereum aimed at businesses and institutions. These developments underscore the growing interest and confidence in integrating traditional financial instruments with blockchain technology.

## Expansion of Stablecoins

The stablecoin market continues to grow. Familiar actors, new entrants, and governments are contributing to the expansion. A variety of new products will be worth watching moving forward.

Tether remains the dominant force. With a total market cap exceeding \$119 billion, Tether now reportedly generates more profit than BlackRock. Tether posted \$6.3 billion in profits for 2023, surpassing BlackRock's \$5.5 billion. A portion of these profits has been allocated to buying Bitcoin, and Tether now holds over 75,300 Bitcoin, according to data from Arkham Intelligence.

The rise of new stablecoins is also reshaping the landscape. Ethena, for instance, grew rapidly due to its attractive yields and an accompanying airdrop that helped boost its adoption. However, after a strong start, Ethena has seen a significant decline, losing \$1.1 billion in market cap in Q3 alone.

Other new entrants include ONDO's USDY and BlackRock's BUIDL, both of which are tokenized treasury products. These stablecoins mirror the strategy of capitalizing on rising yields from US treasuries. However, with interest rates expected to fall, the expansion of these products could face headwinds.

PayPal's stablecoin, pyUSD, stands out as a unique example of a traditional Web2 company successfully venturing into the Web3 space. In August, pyUSD's total circulating supply surged past \$1 billion before settling back to around \$700 million. A key factor behind PayPal's success has been strategic adoption of emerging blockchain ecosystems like Solana, where half of pyUSD's supply is currently deployed. This move highlights PayPal's forward-thinking approach, integrating their stablecoin into platforms that are gaining traction within decentralised finance.

In addition to pyUSD's growth, PayPal has expanded its cryptocurrency services, allowing US business customers to buy, hold, and sell digital assets directly from their accounts. The company also plans to enable merchants to transfer cryptocurrencies on-chain to approved third-party wallets. These developments signal that PayPal is not just experimenting with Web3 but positioning itself as a significant player in this evolving space.

The success of pyUSD may have encouraged other companies to explore stablecoins. For instance, fintech firm Revolut is reportedly considering launching its own stablecoin, and Latin American e-commerce giant Mercado Libre has announced the creation of a USD-pegged stablecoin.

Governments are also taking note of stablecoin growth. The state of Wyoming has been rumored to launch a stablecoin as early as Q1 2025, while Russia plans to introduce stablecoins linked to the Chinese Yuan and a potential BRICS currency, aiming to reduce reliance on the US dollar for international trade.

Despite the variety of new products, USD-pegged stablecoins continue to dominate the market, comprising over 99% of the total stablecoin market capitalization. Tether, for example, is developing a stablecoin pegged to the UAE dirham, while Russia's aforementioned stablecoin is aimed at linking to the Chinese Yuan and BRICS currency. SG Forge, a subsidiary of France's Societe Generale, has also announced plans to launch the euro-pegged CoinVertible (\$EURCV) on Solana. This trend will be interesting to monitor, particularly as efforts to introduce non-USD stablecoins gain momentum.

## Emerging Layer 2 Solutions

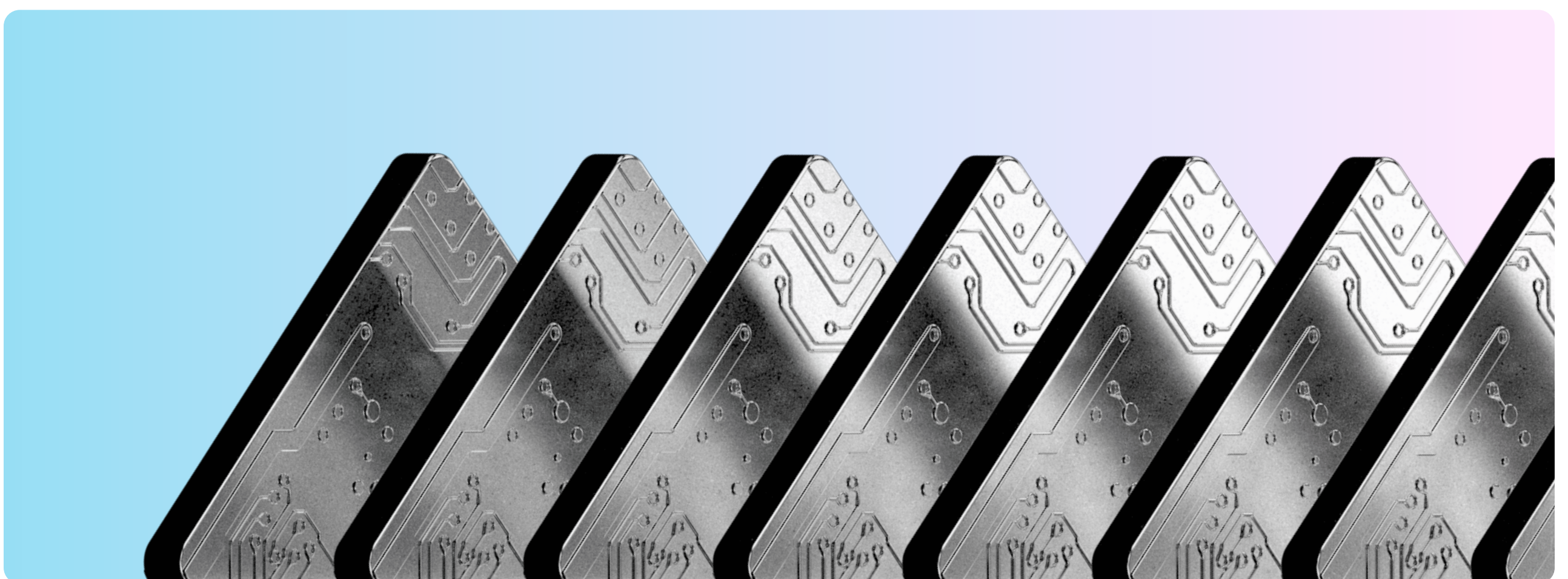
The rise of Ethereum Layer 2 solutions has attracted significant participation from major corporations, signaling that traditional businesses are increasingly recognizing the potential of scalable blockchain networks. Among the most notable players is Coinbase. Its Layer 2 network, Base, has quickly emerged as one of the largest platforms in the space. With the highest number of active addresses and transactions among L2s, Base has generated over \$60 million in revenue for Coinbase, showcasing the commercial viability of integrating DeFi infrastructure into existing business models.

Layer 2 solutions like Base are not only addressing Ethereum's scalability issues but also enabling lower transaction fees, faster processing times, and enhanced user experiences. These are critical factors for mass adoption by both retail and institutional users. These advancements are creating new opportunities for DeFi applications, NFTs, and gaming projects, which are increasingly looking to L2s for improved performance.

Beyond Coinbase, Sony is making strides with its upcoming Layer 2 solution, Soneium. With specific launch details still emerging, Sony has made it clear that they are committed to leveraging blockchain technology to enhance their digital ecosystem. Soneium Spark, a key initiative, is an incubation program offering mentorship and up to \$100,000 in funding for development teams. By fostering innovation through this program, Sony is positioning itself at the forefront of corporate blockchain adoption, aligning with a growing trend of traditional companies embracing decentralised technologies to create new opportunities and expand their services into digital markets.

The emergence of Layer 2 solutions is having an impact beyond Ethereum, with sectors like finance, supply chain, and gaming exploring the scalability and efficiency these platforms offer. As they mature, innovations in cross-chain interoperability are likely to enhance the communication between L2s and other blockchains, potentially creating new ecosystems of dApps that transcend individual chains.

The focus of Layer 2 solutions will likely shift toward interoperability and enterprise adoption, with companies like Sony and Coinbase laying the groundwork. As more businesses adopt blockchain, expect a surge in custom, enterprise-grade Layer 2 networks that are secure, scalable, and tailored to specific needs, reshaping industries in a digital-first world.



# Future of DeFi Yield

The DeFi yield landscape has matured significantly from its early yield farming days. Several key factors have impacted the ecosystem, including market saturation, risk-adjusted returns, and new protocol innovations.

As more capital flowed into DeFi, traditional yield sources such as staking and lending have experienced yield compression. Yields in these sectors have gradually decreased over time as more participants are chasing the same returns. Protocols that once offered double-digit APYs have seen those rates decline as liquidity has increased and opportunities have become more competitive. Investors are now also more discerning. They're seeking opportunities that offer favorable returns without disproportionate risk. High APYs are often a red flag, signaling unsustainable yields or high-risk opportunities.

New developments that are reshaping how yield is generated in DeFi include:

- **Restaking:** Initially centered around rehypothecating staked ETH to secure other decentralised networks, restaking has rapidly evolved to encompass a broader range of assets. This opens up new yield opportunities and increases capital efficiency.
- **Concentrated liquidity:** Concentrated liquidity AMMs (cAMMs) has revolutionised DEXs by allowing LPs to focus their assets within specific price ranges, thus enhancing their capital efficiency and maximizing returns. Automated liquidity management (ALM) simplifies the process of providing liquidity to cAMMs by automating the rebalancing of liquidity ranges. This makes it easier for the average user to participate in liquidity provision without needing to actively manage their positions.
- **Isolated money markets:** Many lending platforms are now adopting isolated models, where risks are confined to individual assets. This ensures that an exploit or failure in one market doesn't impact the entire platform, reducing systemic risk and offering more stable yield opportunities.

These forces are influencing how users position themselves within DeFi's evolving, efficient frontier.

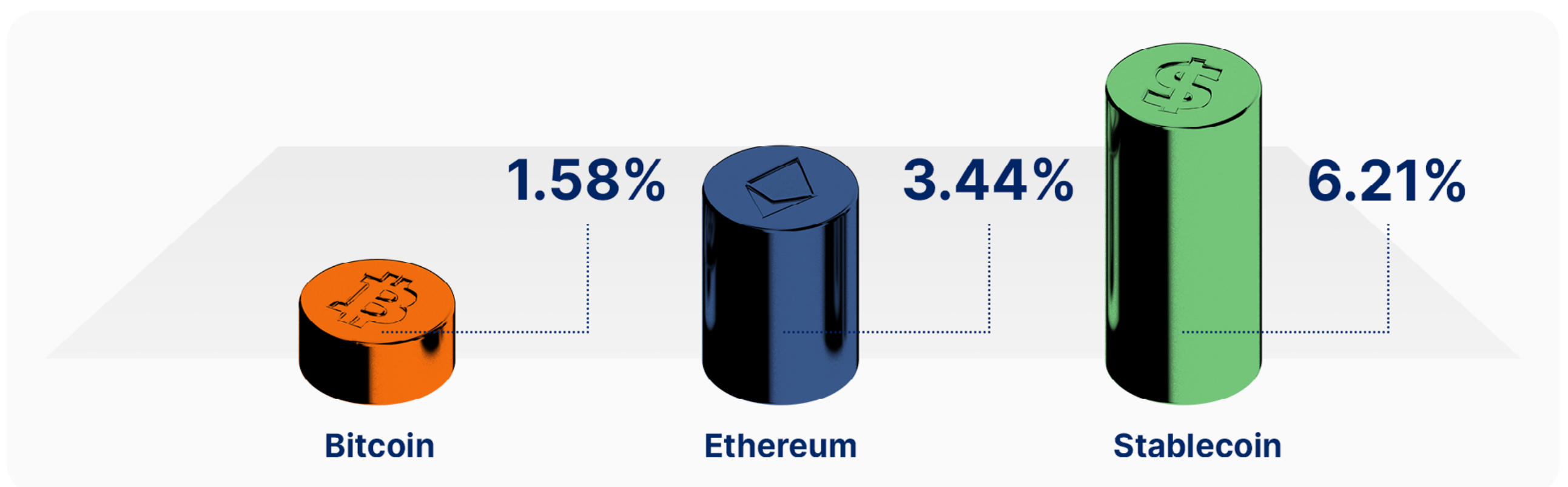
## Efficient frontier in DeFi

In TradFi, the concept of the efficient frontier represents the optimal balance between risk and return across various investment opportunities. It illustrates the set of portfolios that offer the highest expected return for a given level of risk, with risk plotted on the x-axis and expected return on the y-axis. Risk-seeking investors tend to select investments on the right side of the frontier, accepting higher risk for potentially greater returns, while risk-averse investors choose investments on the left side, prioritizing lower risk even if it means lower returns.

DeFi is evolving beyond its nascent stages, and investors are beginning to position themselves along a similar efficient frontier by selecting yield opportunities that align with their individual risk and return preferences. New protocol innovations in DeFi are reshaping the yield frontier, prompting investors to adapt their portfolio strategies accordingly.

Analysing the yield frontier across different asset classes—Bitcoin (BTC), Ethereum (ETH), and stablecoins (USD)—reveals unique insights into how investors are currently distributed across the DeFi landscape. While lower-risk pools with stable returns continue to dominate in terms of TVL, an increasing number of investors are exploring higher-yield opportunities that come with greater risks. This shift reflects a broader trend in DeFi, where users are reassessing their strategies and risk tolerance in light of new opportunities.

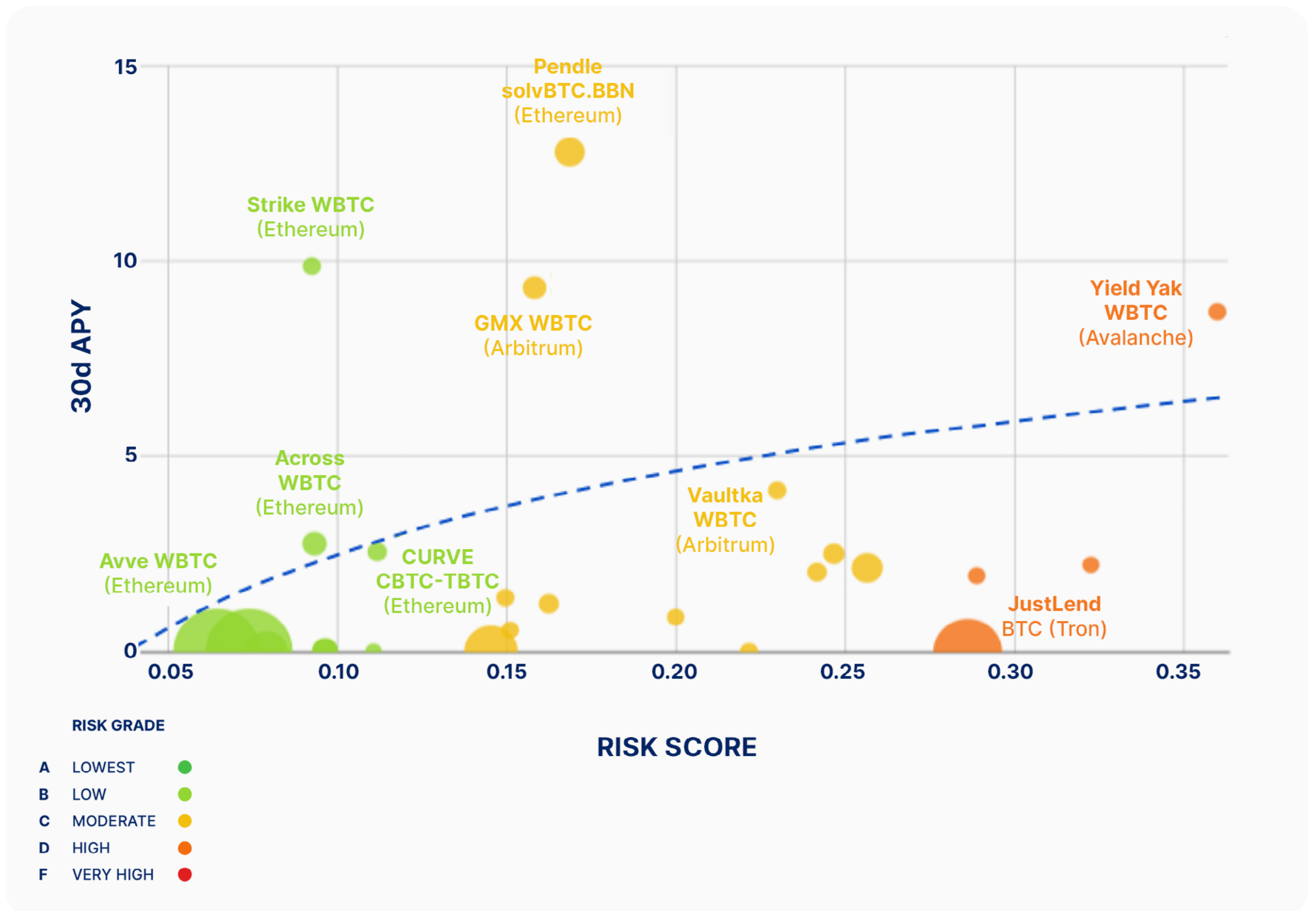
GRAPH 12 MEDIAN APY BY ASSET CLASS



Source: DefiLlama, exponential.fi

## Bitcoin pools

GRAPH 13 BITCOIN APY VERSUS RISK



Source: exponential.fi

When evaluating yield opportunities for Bitcoin, Wrapped Bitcoin (WBTC) remains the primary asset used to generate yield on BTC within the DeFi ecosystem. Since Bitcoin itself does not natively support smart contracts and lacks a native DeFi infrastructure, WBTC has emerged as the main vehicle to unlock the dormant capital held in Bitcoin, with nearly \$10 billion worth of BTC bridged to Ethereum. However, this introduces a fundamental layer of risk to the Bitcoin yield landscape due to the dependency on the centralized WBTC bridge.

Currently, the yield offerings for Bitcoin are relatively limited, with most pools offering less than 5% APY. As of the third quarter of 2024, the majority of Bitcoin's TVL (represented by the size of the bubbles in the graph) is concentrated in lending pools like Aave and JustLend, which offer near-zero yields. These pools primarily attract conservative investors focused on preserving their BTC holdings while utilizing their capital for strategic purposes. For example, many investors implement a carry trade by using their WBTC as collateral to borrow stablecoins, which are then deployed into higher-yielding DeFi strategies. In this scenario, investors are not earning yield directly on their BTC but are leveraging it to generate yield on stablecoins or other crypto assets. This strategy allows them to maintain their Bitcoin exposure while capitalizing on the more lucrative opportunities available in other parts of the DeFi ecosystem.

However, recent developments are expected to reshape the Bitcoin yield frontier. The rise of the Bitcoin DeFi (BTCFi) narrative is introducing new ways to earn yield directly on Bitcoin. New Layer 2 solutions built on Bitcoin enable smart contracts, unlocking opportunities for native BTC yield generation. Protocols like Threshold's tBTC are emerging as competitors to WBTC, offering decentralized alternatives for bridging BTC into the DeFi ecosystem. Additionally, new protocols like Babylon and EigenLayer allow BTC to be restaked in return for yield. Pendle has started to tap into these Bitcoin yield offerings (pools like SolvBTC.BBN), and has already attracted over \$300 million TVL. These developments signal a growing interest in earning yield directly on Bitcoin without the need to convert it into WBTC or other wrapped versions.

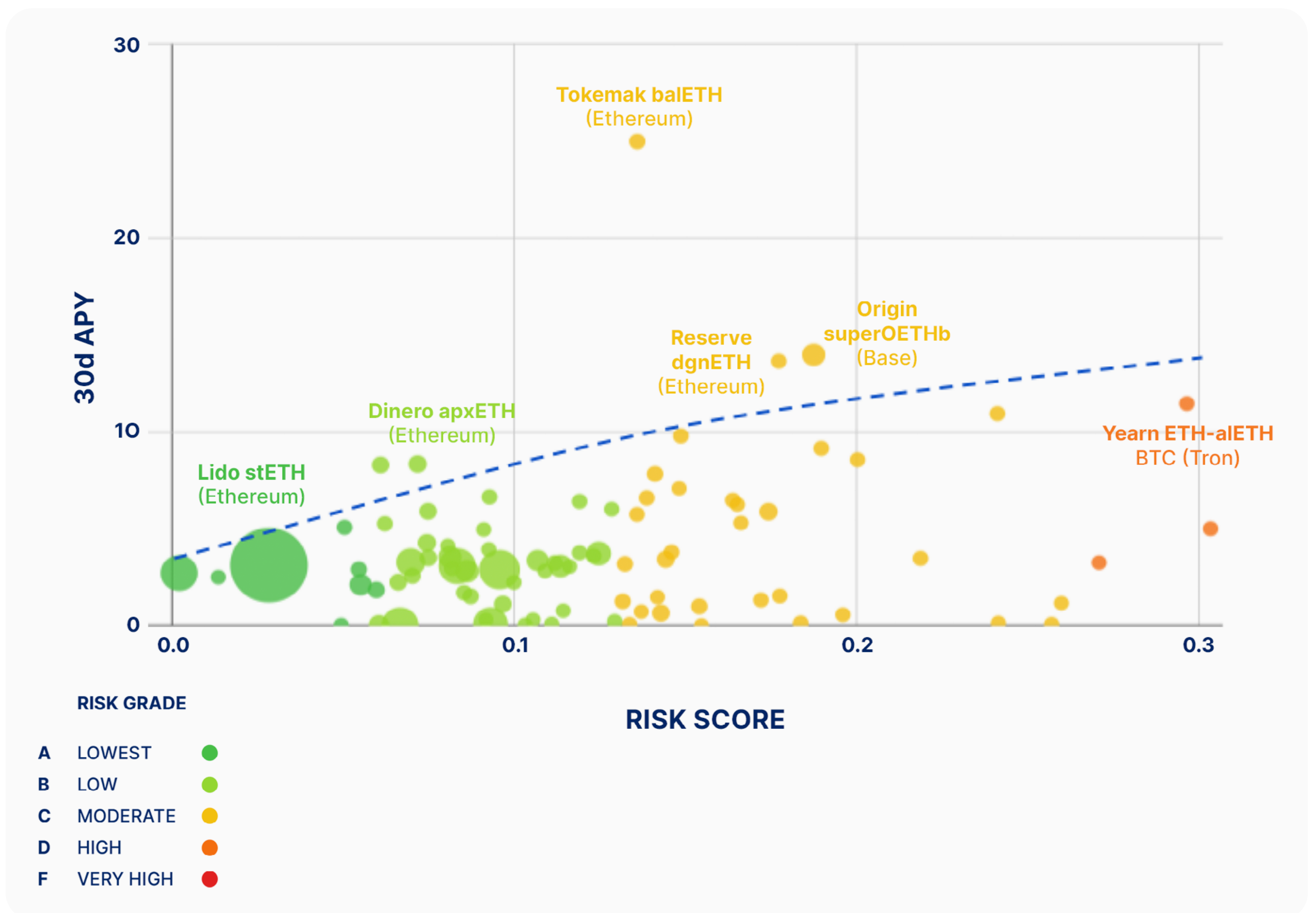
As new innovations in BTCFi continue to emerge, we can expect more pools to approach the efficient frontier. This evolution will likely bring in a wider spectrum of yield opportunities for Bitcoin investors, enabling them to select investments that better align with their individual risk and return expectations.



### Ethereum pools

Ethereum’s yield landscape distinguishes itself from Bitcoin’s due to its native staking yield of approximately 3%, which serves as the closest equivalent to a “risk-free rate” in DeFi. This staking yield stems from Ethereum’s transition to a PoS network, where validators earn rewards for securing the blockchain. Platforms like Lido, one of the first and largest liquid staking services, offer users the ability to stake their ETH and receive staking rewards without locking up their assets. With over \$25 billion in ETH staked, Lido represents the largest pool by TVL in all of DeFi, attracting conservative investors due to its low risk and stable returns.

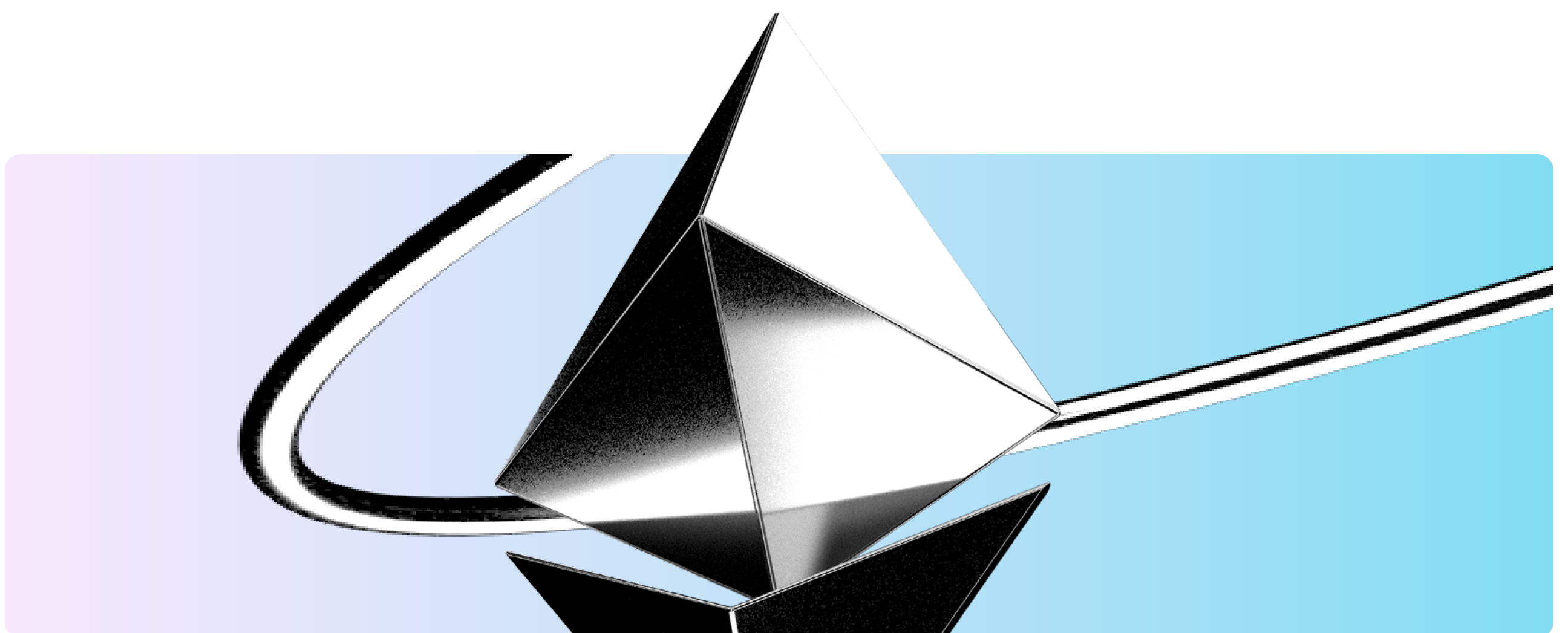
GRAPH 14 ETHEREUM APY VERSUS RISK



Source: exponential.fi

The combination of Ethereum's native staking yield and its mature DeFi ecosystem enables investors to access more sophisticated and varied yield strategies. Ethereum yield farmers are more willing to experiment with complex strategies and often demand significantly higher APYs to compensate for the additional risks involved. For example, pools like Tokemak's baETH, Origin's superOETHb and Reserve's dgnETH all offer yields exceeding 10% APY. However, these higher yields come with increased risks due to factors such as impermanent loss, smart contract vulnerabilities, or the use of newer, less battle-tested protocols.

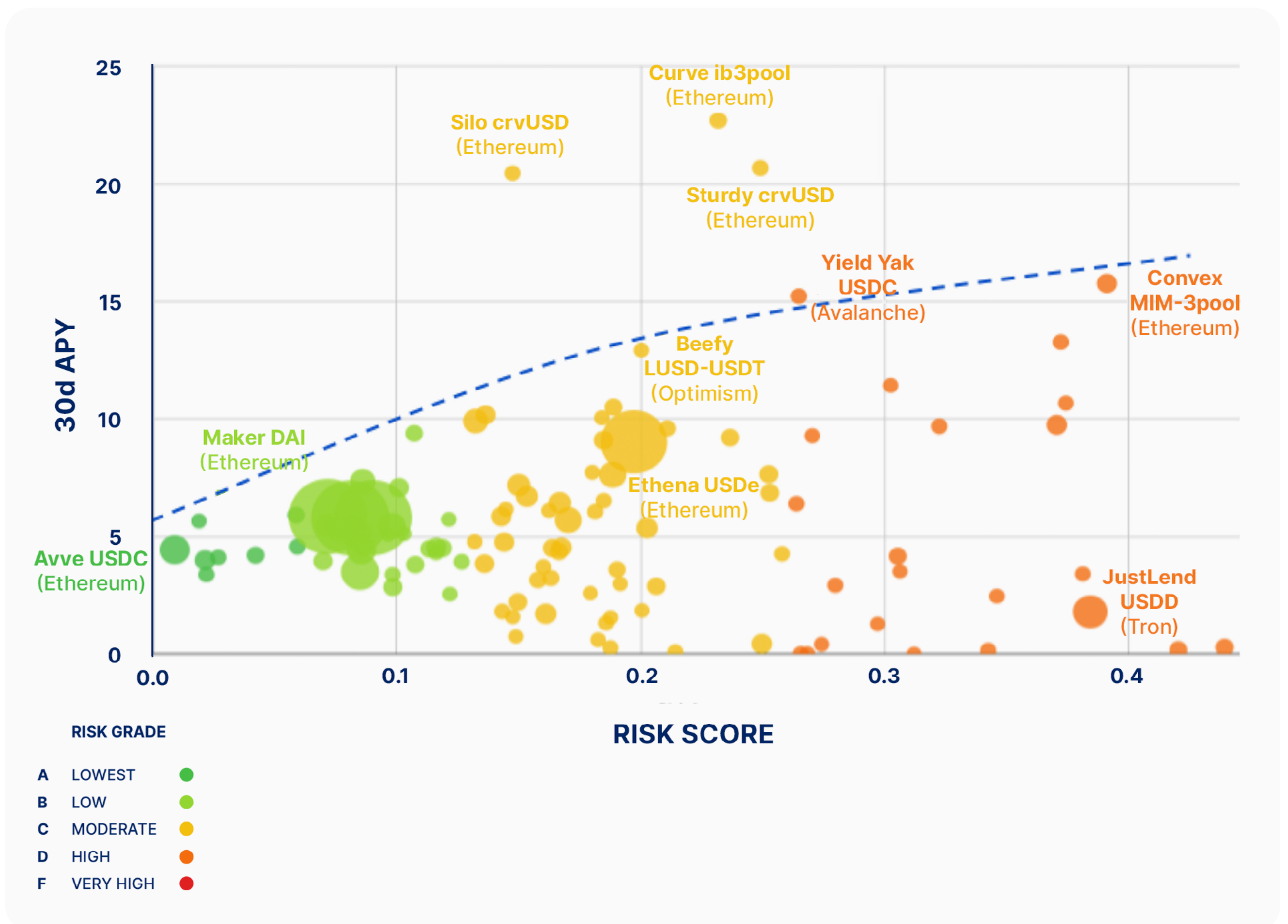
Ethereum's DeFi landscape offers a diverse array of protocols and financial instruments that cater to different risk appetites. Investors can choose from simple staking and lending platforms to more complex yield farming and liquidity provision strategies. The willingness to take on more risk for higher yield reflects the ecosystem's overall greater maturity.



### Stablecoin pools

Stablecoins serve as a cornerstone of DeFi, providing a refuge for risk-averse investors seeking consistent returns without exposure to the volatility of cryptocurrencies. Predominantly USD-based, stablecoins are inherently tied to the Federal Reserve’s funding rate, currently around 5%. This rate sets a foundational benchmark for stablecoin yields across DeFi, with lending platforms like Aave and Compound closely mirroring this base rate. These low-risk pools primarily cater to conservative investors who prioritize security, as evidenced by the significant TVL concentrated in these platforms.

GRAPH 15 STABLECOIN APY VERSUS RISK

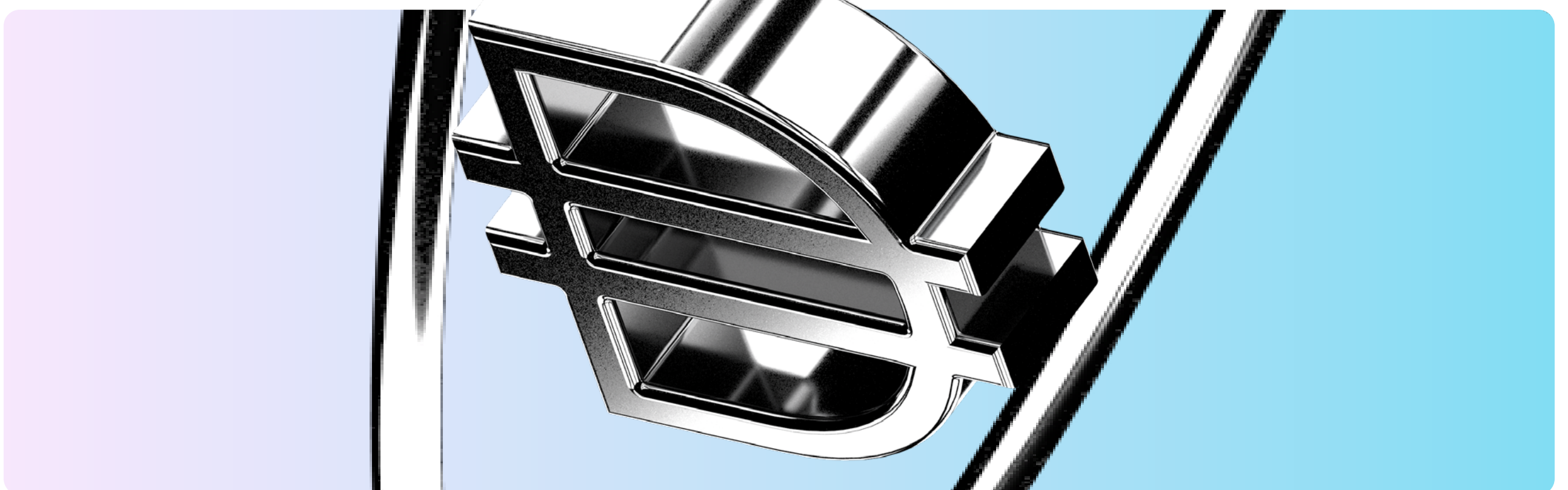


Source: exponential.fi

The integration of RWAs into DeFi has been a key driver of stablecoin yields, most notably through Maker's DAI Savings Rate (DSR). By collateralising its DAI stablecoin with US Treasuries and other RWAs, MakerDAO effectively tokenizes TradFi yields, offering stablecoin holders an opportunity to earn returns competitive with those in TradFi. This stable, low-risk yield environment provides investors with a place to park their stablecoins confidently within established protocols.

While the majority of TVL remains in low to medium-risk pools, there are growing opportunities for higher yields, like Ethena's USDe, which offer APYs exceeding 10%. Ethena has introduced a novel way of generating stablecoin yield by tokenizing the popular cash-and-carry trade, which generates yield by simultaneously longing and shorting ETH/BTC to collect revenue from funding rates. However, these higher yields often come with additional risks, including more counterparty risks and the complexity of advanced yield strategies.

The stablecoin yield landscape offers a well-established range of low-risk to high-risk opportunities, providing investors with a broad spectrum of choices based on their risk tolerance. The presence of a stable, risk-free rate tied to the Federal Reserve's rate anchors the sector, offering predictable returns for conservative investors. Meanwhile, continued innovations in RWAs and advanced yield strategies continue to push the boundaries for those seeking greater returns.



# Conclusion

The DeFi ecosystem has been resilient throughout 2024 and has successfully navigated significant market volatility and demonstrated its robustness. Key sectors—including lending, decentralised exchanges, staking protocols, and cross-chain bridges—have performed admirably under stress. These sectors effectively managed extreme market conditions, safeguarding user assets and maintaining confidence in DeFi systems.

Looking ahead, DeFi stands at a critical juncture with increasing institutional interest and the tokenization of traditional assets, which signals greater integration between DeFi and TradFi. While challenges remain — such as regulatory uncertainties and the need for enhanced risk management — the antifragile nature of DeFi positions it well for future growth. The ecosystem’s inherent adaptability and continuous innovation suggest that DeFi is poised to play a pivotal role in reshaping global financial systems, offering more efficient, transparent, and inclusive alternatives to TradFi.





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# DeFi 3Q24 Report

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