BINANCE RESEARCH

# Half-Year Report 2025

JULY 2025

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# 01 / Key Takeaways

- After a substantial 96.2% growth in 2024, the crypto markets saw a modest increase during the first half of 2025, with total market capitalization up 1.99% year-to-date (YTD). The market experienced a decline of 18.61% in the first quarter, followed by a recovery of 25.32% in the second quarter, leading to a slight overall gain for the first six months of 2025. In the first half of 2025, the markets faced significant volatility driven by tariff announcements and escalating geopolitical tensions.

- Major economies and their central banks took markedly different paths in H1 2025, creating a volatile yet opportunity-rich environment for crypto assets. The global landscape was characterized by a gradual slowdown in the U.S. economy and an unexpected easing of inflation, while China defied expectations with a strong 5.4% year-on-year (YoY) GDP growth in the first quarter, reflecting the positive impact of its stimulus measures. This economic divergence was further amplified by a massive liquidity surge, as the combined money supply of the U.S., China, Europe, and Japan increased by US$5.5T— the largest 6-month rise in four years — primarily driven by monetary easing outside of the hawkishly paused U.S. Federal Reserve. Adding to the complexity were dramatic geopolitical situations, highlighted by a brief but intense U.S.-China trade war that pushed tariff rates to an astonishing 145% before eventually easing. Amid this turbulent environment, Bitcoin revealed its evolving nature: it behaved less like a “safe haven” and more like a high-beta asset, yet still delivered an impressive +13% YTD return, outperforming most traditional equity indices. We view Bitcoin’s price cycle as a leading indicator for the global manufacturing cycle by 8 to 12 months, suggesting that H2 2025 could present further opportunities.

- Bitcoin's performance in H1 2025 reflects its ongoing maturation as a key macro asset and institutional favorite. With a market cap holding above US$2T and peak crypto market dominance at 65.1% (its highest level in over four years), BTC remains among the top-performing global assets, delivering strong double digit YTD returns even amid macro volatility. Spot BTC ETFs have become a critical structural driver, drawing sustained institutional inflows and significantly reshaping market dynamics. Corporate adoption also saw substantial growth, with total holdings reaching 848.1K BTC across over 140 firms, as regulatory clarity and favorable accounting rules boosted confidence. Meanwhile, Bitcoin’s economic model is evolving: native scaling solutions made notable progress, Bitcoin DeFi (BTCFi) remains a strong on-chain use case — with total value locked (TVL) still up over 550% YoY — though on-chain token standards experienced a decline in speculative activity. Despite reduced base-chain activity and transaction fees, network security and hash rates remain robust, highlighting Bitcoin’s network resilience.

- Major Layer 1 (L1) protocols saw distinct growth paths: Ethereum retained its dominance despite pricing pressures, driven by strong institutional inflows, successful upgrades like Pectra, and leading developer activity. Solana maintained high transaction throughput, grew institutional interest, and improved network reliability ahead of Firedancer's launch. BNB Chain saw record Decentralized Exchange (DEX) activity, expanded into memecoins, real-world assets (RWAs), AI applications, and performance upgrades like Pascal and Maxwell. Meanwhile,

Avalanche accelerated enterprise subnet adoption, Sui more than doubled its Decentralized Finance (DeFi) TVL and stablecoin flows, Tron reinforced its role as a key stablecoin settlement layer, and TON deepened its strategic integration with Telegram.

- For Ethereum Layer 2s (L2s), H1 2025 marked a more nuanced cycle. Signs of market saturation, diverging growth paths, rising modular competition, and a 'blob fee arms race' all tested liquidity durability, especially as the debate over Ethereum's base layer value capture grew. Optimistic rollups maintained liquidity leadership and user share, with Base and Arbitrum standing out for sustainable fee generation, while ZK rollups made real technical strides on prover costs but still trailed in TVL and stickiness. However, persistent fragmentation and mixed progress on sequencer decentralization and Stage 2 readiness keep long-term maturity in flux. L2s now must prove they can deliver sustainable economics — without over-relying on incentives — and credible decentralization, even as Ethereum upgrades like Fusaka and PeerDAS drive scalability forward.

- The DeFi sector demonstrated significant maturity and resilience, with its growth driver shifting from internal speculation to institutional adoption and the integration of RWAs. While TVL stabilized at approximately US$151.5B, monthly active users soared 240% YoY, and the spot trading volume ratio of DEXes hit a record high of 29%, indicating strong user growth and a structural shift in market share. During this period, restaking, led by EigenLayer, became an important cornerstone of the ecosystem, while prediction markets achieved a breakthrough through a partnership between Polymarket and the social media giant X. Overall, DeFi is transitioning to a sustainable growth phase supported by real-world value, but still faces severe systemic risks and security challenges.

- The stablecoin sector experienced significant growth in H1 2025, with total market cap surpassing US$250B, marking new all-time highs. Tether (USDT) maintained its dominant position with a market cap of US$153–156B, while Circle's USDC emerged as the fastest-growing stablecoin, nearly doubling its supply to reach ~US$61.5B and increasing its market share from 20% to over 25%. On-chain activity also surged, with over US$7T in adjusted stablecoin transaction volume recorded across major blockchains, led by Tron, Ethereum, and Solana. Regulatory clarity played a key role in boosting institutional confidence — most notably through the U.S. Senate's passage of the GENIUS Act and the enforcement of MiCA rules in the EU — positioning stablecoins as increasingly recognized tools for payments, remittances, and on-chain settlement. Overall, H1 2025 marked a turning point in stablecoins' evolution from crypto-native primitives to mainstream financial infrastructure.

- H1 2025 highlighted a growing bifurcation in crypto's trajectory — while institutional adoption accelerated through regulatory clarity and stablecoin integration, the consumer layer remained a vital, if more chaotic, frontier of innovation. On-chain activity was increasingly shaped by products that prioritized usability, culture, and immediacy: wallets became 'super apps', DeFi merged with fiat neobanking, and casual gaming and memecoins captured mainstream attention. Though often overshadowed by institutional narratives, consumer crypto continues to serve as the space where new behaviors are tested, cultural moments are minted, and user pipelines are built. As the infrastructure matures, sustaining momentum on the consumer side — through intuitive products, low-friction onboarding, and

emotionally resonant experiences — remains essential to ensuring that crypto's long-term promise extends beyond financial rails into everyday life.

- The convergence of decentralized technologies with artificial intelligence and real-world infrastructure is driving a new wave of innovation across the blockchain ecosystem. Decentralized Financial AI (DeFAI) is emerging as a critical advancement, embedding autonomous AI agents into DeFi protocols to optimize trading, lending, and governance in real time. Concurrently, Decentralized Physical Infrastructure Networks (DePIN) are expanding blockchain's reach into RWAs and services by enabling decentralized ownership and management of physical infrastructure — in turn supporting advancements in Decentralized Physical AI (DePAI) and Decentralized Science (DeSci). Collectively, these interconnected domains represent a paradigm shift toward a decentralized, AI-powered, and community-governed digital economy that bridges virtual and physical worlds.

- In 2025, the blockchain and crypto ecosystem reached a new level of maturity, characterized by adoption across enterprises of all sizes — from Fortune 500 companies to SMEs — and strong institutional investor confidence. This widespread adoption is driving innovation and expanding use cases well beyond retail trading, including supply chain transparency, cross-border payments, DeFi integrations, digital identity, and tokenization of RWAs.

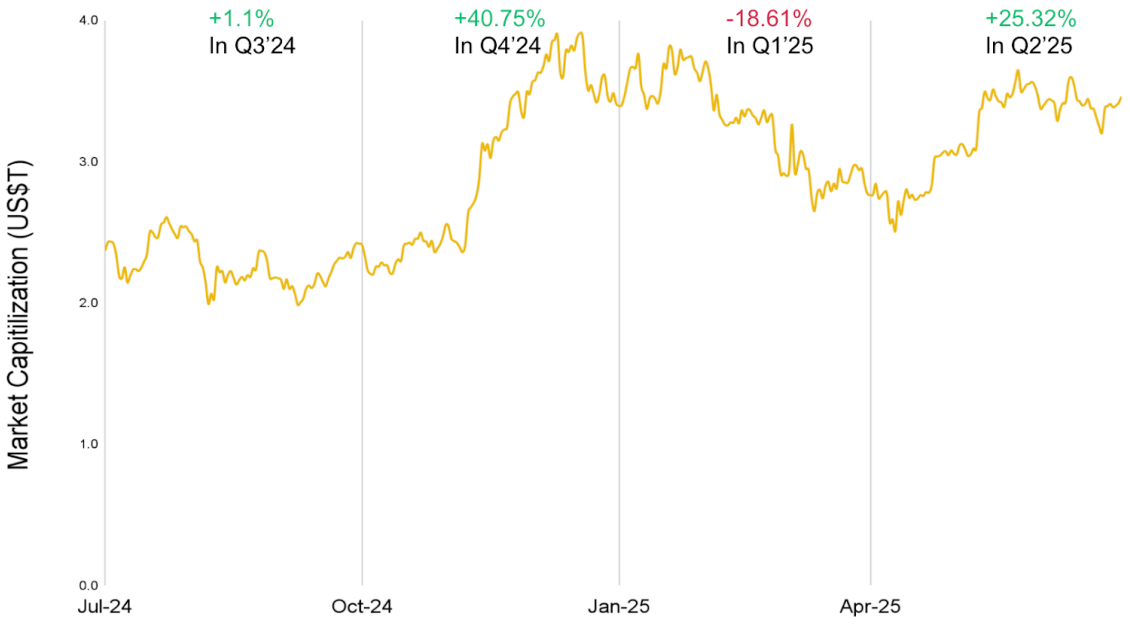
- The global crypto regulatory landscape experienced notable shifts marked by strategic crypto-friendly moves in the U.S. after Donald Trump's inauguration as the president. At the same time, Europe is implementing stricter crypto enforcement measures while Asia presents a contrasting regulatory environment with Hong Kong fostering innovation through open licensing and tax incentives, and Singapore imposing stringent compliance measures, causing industry migration. Global efforts also progressed with respect to standardizing tax transparency and improving cross-border regulatory cooperation.

- Moving into the second half of 2025, ten key themes are particularly exciting to us, and we anticipate significant progress in these areas throughout the year. These themes span various narratives and sectors, such as those related to the macro environment, policy and regulation, Bitcoin ecosystem, stablecoins, RWAs, and more.

# 02 / Overview

Following a 96.2% surge in 2024, crypto markets experienced a slight increase in the first half of 2025, with total market capitalization rising 1.99% year-to-date. In the first quarter, the market capitalization fell by 18.61%, while the second quarter rebounded by 25.32%, resulting in a slight gain for the first half of 2025.

**Figure 1: Total crypto market capitalization increased by 1.99% year-to-date**



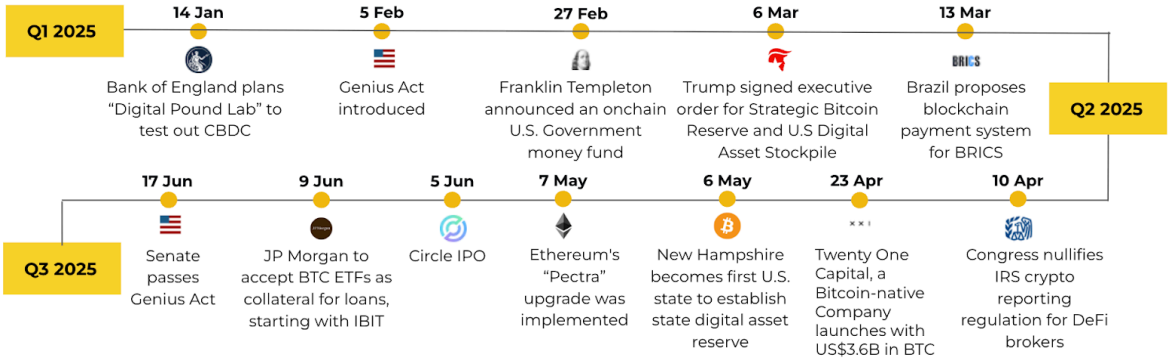

Source: Coingecko, Binance Research, as of June 30, 2025

Favourable macroeconomic conditions, spurred by the U.S. Federal Reserve's first interest rate cut since 2020 in September, reignited investor sentiment in the latter part of 2024, driving risk assets such as equities and crypto to new highs. Sentiment was further boosted in November following the U.S. presidential election, as investors anticipated favorable regulatory shifts for digital assets, propelling total crypto market capitalization past US$3T for the first time since 2021.

Initial optimism at the start of 2025 was tempered by persistent inflation and weak economic data, which delayed expected rate cuts. Additionally, geopolitical tensions and the universal tariffs imposed by former President Trump in April further increased uncertainty and weighed on market sentiment. The market recovered following a pause in tariffs and increased regulatory clarity on stablecoins and DeFi, boosting investor confidence in digital assets.

In the first half of the year, various narratives gained momentum**, including Bitcoin investment vehicles, Stablecoins, AI Agents, and Tokenized RWAs**.

**Figure 2: Timeline of notable events in H1, 2025**




Source: Binance Research, as of June 30, 2025

Looking ahead, we are closely monitoring developments in global monetary policies, updates on trade tariffs, institutional participation in the cryptocurrency sector, the growing convergence of cryptocurrency and artificial intelligence, and the emergence and resurgence of crypto-specific market narratives. Additionally, following the success of Circle, we anticipate a wave of new cryptocurrency IPOs in the near future.

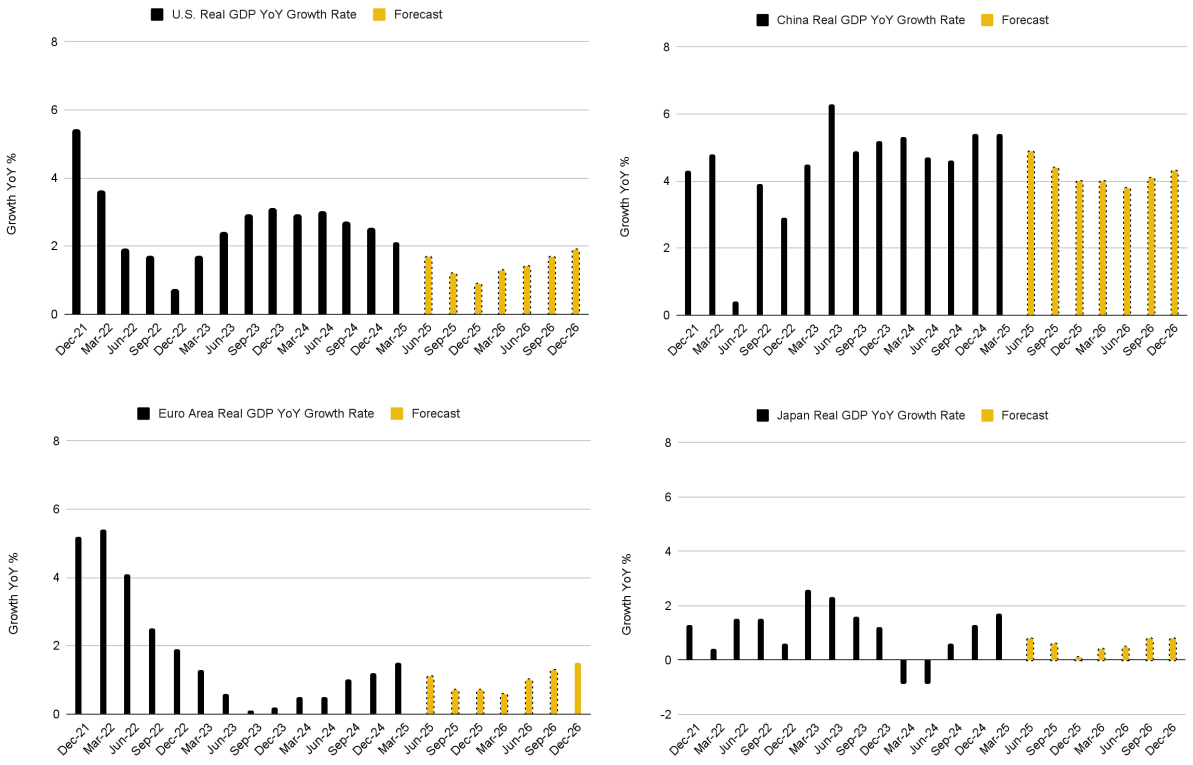
# 03 / Macro and Markets

In the first half of 2025, the global macroeconomic landscape was characterized by a "Great Divergence." Major economies pursued starkly different monetary policy paths, which, combined with sudden geopolitical shocks, created a complex backdrop for the cryptomarket. This report will review and look ahead at the crypto market from four perspectives: the macroeconomy, monetary policy, geopolitical situations, and regulatory policies.

## 3.1 Macroeconomic Chessboard in H1 2025: Divergent Paths and Uncertainty

The first half of 2025 saw the global macroeconomy marked by a significant "Great Divergence." Differing monetary policy trajectories among major economies and unexpected geopolitical shocks formed a complex environment for the cryptomarket. Global liquidity first tightened and then eased, with the Federal Reserve halting its balance sheet reduction, providing a tailwind for risk assets.

**Figure 3: G4 Quarterly GDP Performance and Market Forecasts**




Source: Tradingeconomics, Binance Research, as of June 30, 2025

The above four charts show the Real GDP YoY Growth Rate (black bars) and Forecast (yellow bars) for the U.S., China, the Euro Area, and Japan, respectively.

## Global Economic Performance

In the first half of 2025, major economies showed divergent trends: the U.S. gradually slowed, China exceeded expectations, and the Eurozone and Japan grew steadily.

- **United States:** Following a technical quarter-over-quarter contraction in Q1 2025, the US economy is expected to see its fourth consecutive quarterly slowdown in year-over-year GDP growth in Q2. The market anticipates this slowing trend will continue for the remainder of the year, primarily due to increased imports (a negative in GDP accounting) and reduced government spending.
- **China:** The world's second-largest economy grew by 5.4% YoY in the first quarter, outperforming market expectations despite domestic challenges. This was largely driven by strong export growth and signs that fiscal and monetary stimulus measures are beginning to take effect. However, the recovery's foundation remains unstable. Deflationary pressures persist, with the Consumer Price Index (CPI) falling 0.1% YoY in May for the fourth straight month. With no price pressure, the market expects China to increase stimulus measures to sustain growth, which is good news for the crypto market.
- **Eurozone:** GDP accelerated for the third consecutive quarter, supported by consumption and investment.
- **Japan:** The economy recovered from a previous contraction but still faces weak domestic demand and export pressures.

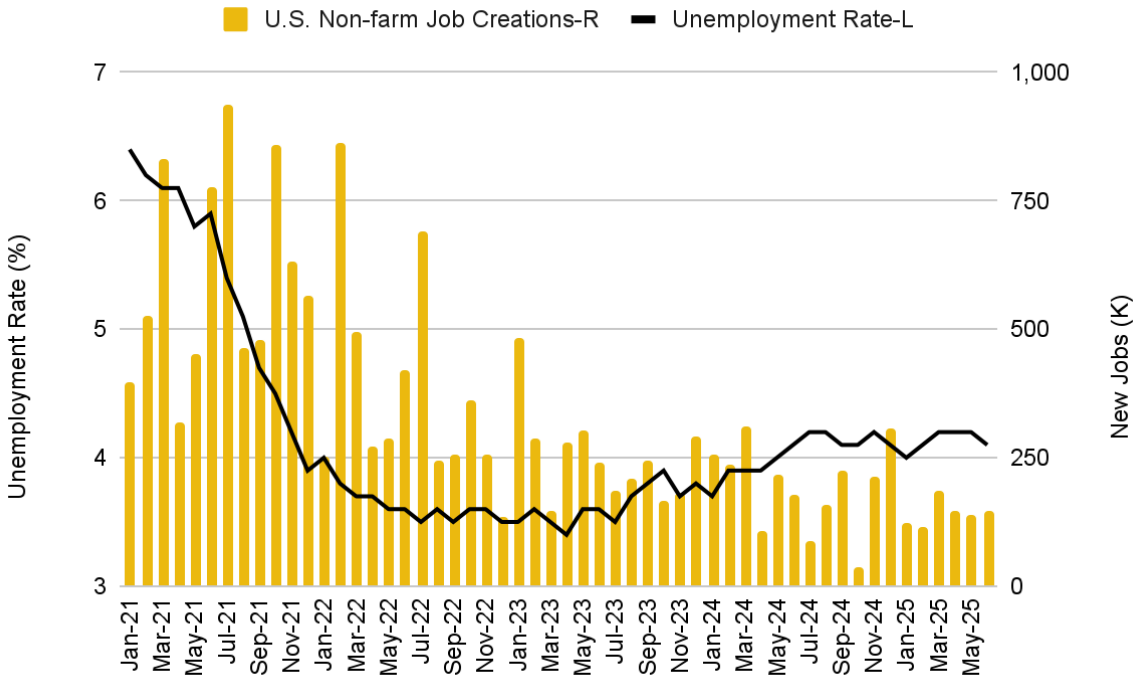
Looking ahead, the market is slightly cautious. Wall Street expects economic growth in major economies to slow in the second half of the year, with a recovery not expected until next year. The economic picture of a weaker US and slightly stronger non-US countries in the first half might be a temporary distortion caused by external shocks (US tariffs) rather than a sustainable recovery signal. The threat of US tariffs led to "front-loading" of exports by US importers and overseas manufacturers to avoid losses. In the future, whether the trade war de-escalates (potentially causing the front-loading effect to disappear) or escalates (further harming exports), there is an expectation of economic weakening.

However, it is important to note that this expectation may already be priced into the market. Current price, consumption, and wage data have not shown significant deterioration. Therefore, it's possible that sentiment will gradually shift from overly pessimistic, and as more data is released, market confidence could be bolstered, supporting a continued rebound in asset prices.

## U.S. Employment Softens, Prices Decline Unexpectedly

The two types of U.S. economic data that most influence asset prices — employment and prices — were a mixed bag in the first half of the year.

**Figure 4: The U.S. labor market shows resilience, but the trend is cooling**

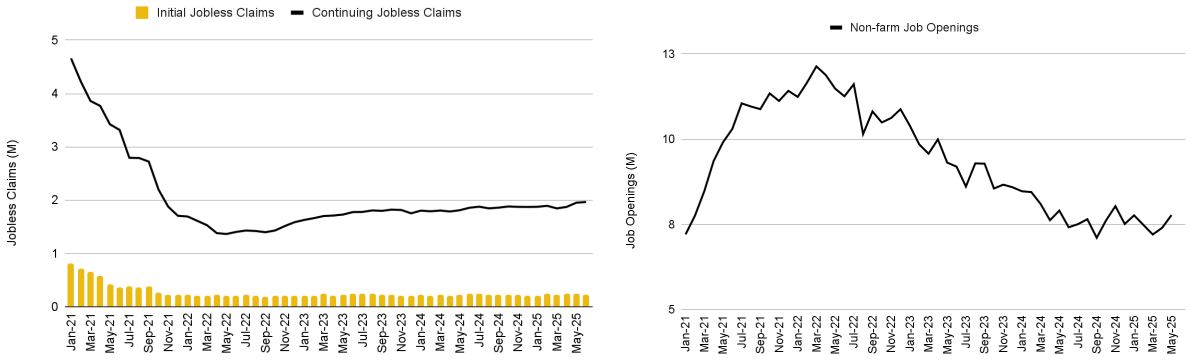



Source: Tradingeconomics, Binance Research, as of June 30, 2025

The U.S. job market shows a gradual, moderate cooling. As of June, the unemployment rate held steady at around 4.1%, matching the highest level since November 2021 but still below the 10-year average of 4.7%. Non-farm payrolls continued to increase but at a cooling trend, averaging 143k per month over the past six months, slightly below the 10-year average of 160,000. Recent growth has been concentrated in specific sectors like healthcare, leisure, and hospitality.

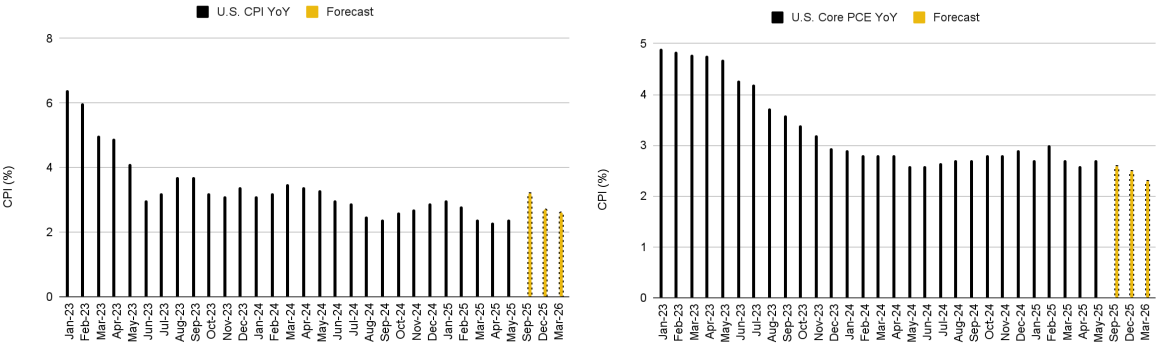
It's noteworthy that long-term unemployment has slowly risen to its highest since November 2021, job openings are at a low since 2011, and the labor force participation rate has fallen to 62.3%, indicating increased difficulty in finding a job.

**Figure 5: U.S. continuing jobless claims edge up as job openings fall**




Source: Tradingeconomics, Binance Research, as of June 30, 2025

**Figure 6: Inflation's stickiness is decreasing**




Source: Tradingeconomics, Binance Research, as of June 30, 2025

**The Consumer Price Index (CPI) shows a continuous but slow downward trend.** In the 12 months through May, overall CPI rose 2.4%, while core CPI (excluding food and energy) increased by 2.7%. The persistence of housing inflation (+3.9% YoY) and services inflation remains a key concern for policymakers. Furthermore, due to a 2-6 month lag in the impact of tariffs depending on the industry, the market expects inflation may rebound in the second half of the year.

The market believes the current risk stems more from inflation "fears" (which have not materialized) than actual inflation, leaving the Fed unable to cut rates despite slowing growth. Most FOMC officials worry that tariffs could lead to rising inflation but tend to view it as a one-time price level shock rather than a long-term inflationary pressure. Therefore, **as time passes, especially from July to September, if inflation data does not rise as officials fear or only grows moderately,** the probability of the Fed cutting rates twice or even more in the fourth quarter could increase significantly.

## Uncertainty in the Bond Market and Fiscal Policy

**Figure 7: U.S. Treasury Yield Spreads remain elevated**

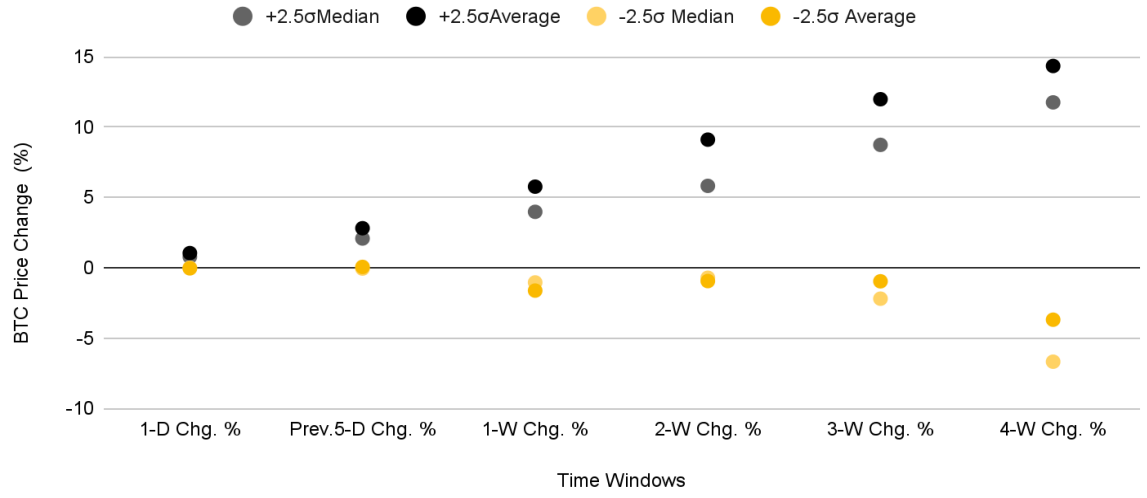

Source: Tradingview, Binance Research, as of June 30, 2025

Fiscal policy and the bond market are core factors influencing the co-movement of major asset classes. Bond market yields remain high, and the expectation of an expanding deficit from "The One, Big, Beautiful Bill" has kept the long-term/short-term spread elevated. The version of the bill passed by the House on May 22 is projected to increase the baseline deficit by US$2.4 trillion over the next 10 years[6], or US$3 trillion including interest payments. This would require an average of US$300 billion in annual tariff revenue to offset, implying the inevitability of tariffs. **The current effective tax rate of 16-17% may need to be maintained to prevent a significant expansion of the deficit[7].**

Since the bill involves raising the debt ceiling, the Treasury's projected "X-date" in August sets a deadline for the vote. To avoid default, the bill needs to be passed before Congress recesses at the end of July.

It's worth noting that despite increased tariffs, "**The One, Big, Beautiful Bill**" also includes tax cuts and credits that could accelerate business investment. As long as tariffs don't see extreme changes, positive catalysts like tax cuts and rate cuts will gradually emerge in Q3 and Q4, which could offset some market uncertainty. However, if the tax cut proposals are curtailed by Congress (a low probability), it could be a negative development.

**Figure 8: BTC Performance under ±2.5σ deviations in U.S. 10Y-2Y Treasury spread**

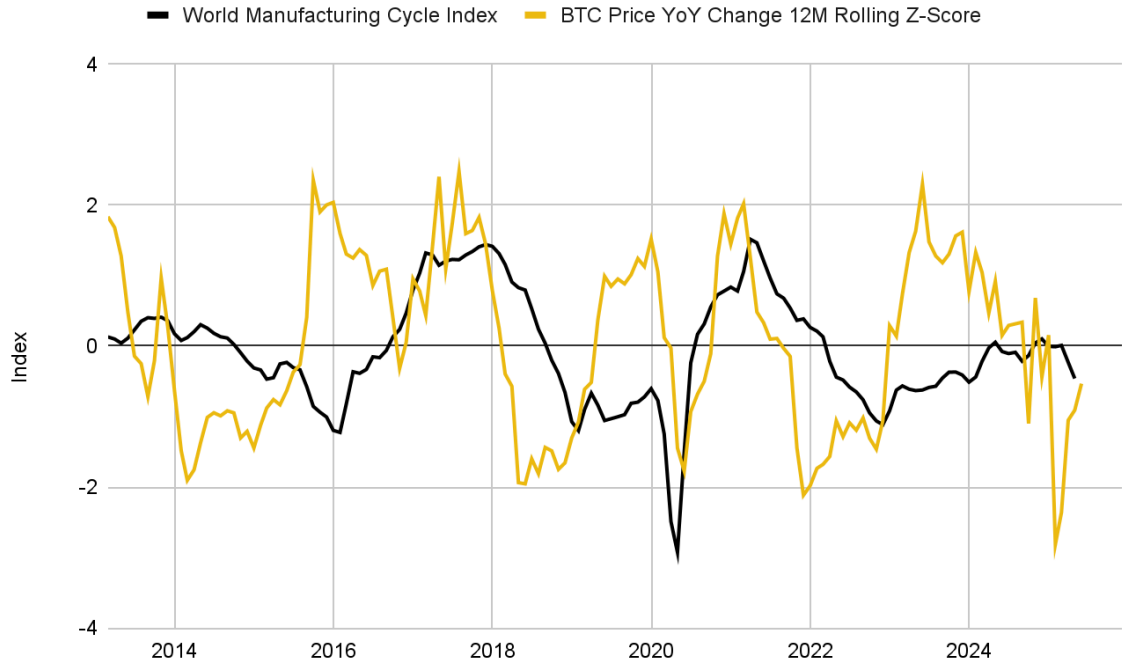



Source: Tradingview, Binance Research, as of June 30, 2025

Historical analysis shows that a widening spread is generally beneficial for Bitcoin. Although "Bull Steepening" and "Bear Steepening" scenarios should be treated differently, both situations represent potential monetary easing, improved liquidity, or growth/inflation expectations that are positive for BTC. However, if the spread widens due to a rising risk premium (e.g., concerns about runaway inflation, fiscal deficits, or a sell-off in long-term bonds), it reflects market anxiety and could be detrimental to Bitcoin. This is why crypto investors must pay attention to fiscal developments.

## Where Are We in the Macro Cycle?

**Figure 9: BTC is a leading indicator of the global macroeconomic business cycle**




Source: FRED, Binance Research, as of June 30, 2025

As an emerging asset class, Bitcoin's price cycle is far from an isolated event; it is **closely linked to the global macroeconomic business cycle.** We compared the World Manufacturing Cycle Index, a macro indicator representing the health of the global real economy, with the rolling Z-Score of BTC's price. The Z-Score here measures how much the year-over-year percentage change in Bitcoin's price deviates from its 12-month average, which can be understood as the "acceleration" or "momentum" of Bitcoin's price movement.

Looking at the data since 2012, the two series show a significant positive correlation in their macro cycles, but Bitcoin leads the real economy by about 8 to 12 months. Therefore, while we cannot predict Bitcoin's price from macroeconomic data, we can use BTC to forecast future economic sentiment.

A possible explanation is that Bitcoin, as one of the most sensitive "beta assets" to global liquidity, reflects the earliest changes in global macro liquidity and investor risk appetite. Subsequently, a market consensus on future policies gradually forms and begins to be priced into a broader range of financial assets (stocks, bonds, credit markets). Financial conditions then begin to shift substantively towards easing or tightening. After a lag of several quarters, these changes in the financial environment eventually affect corporate financing costs, order volumes, and production willingness, and these fundamental changes are captured by PMI data.

## Current Cycle Position: The ‘Mismatch Phase’ Before Dawn

Based on the model above, we are currently in a classic "mismatch phase" where the leading indicator has bottomed out and is rebounding, while the lagging indicator is still seeking a bottom.

- **Leading Indicator (BTC Z-Score):** Reached the trough of this cycle in February 2025 (at approximately -2.8). Since then, the indicator has clearly started to rebound. By June 2025, it had recovered to -0.53. This suggests that at the forefront of capital markets, the worst is over, liquidity is being repaired, and risk appetite is returning.
- **Lagging Indicator (Global PMI):** The PMI remained in negative contraction territory in the first half of 2025 (e.g., -0.58 in June). This is perfectly in line with our model's prediction—it is reflecting the weak BTC momentum that began 12 months ago, in mid-2024. The PMI is still hovering in the bottom region and has not yet shown strong signs of recovery.

Therefore, we are at the bottom of the global economic cycle. Using the model's leading effect, we can infer that the global economic cycle may continue to bottom out until around the end of 2025 to Q1 2026 before starting a clear, multi-quarter upward recovery cycle. Consequently, over the next 6-9 months, we might see continued weakness in PMI data, possibly even lower values, but this will be the "final dip" of the current downturn.

### Market Positioning

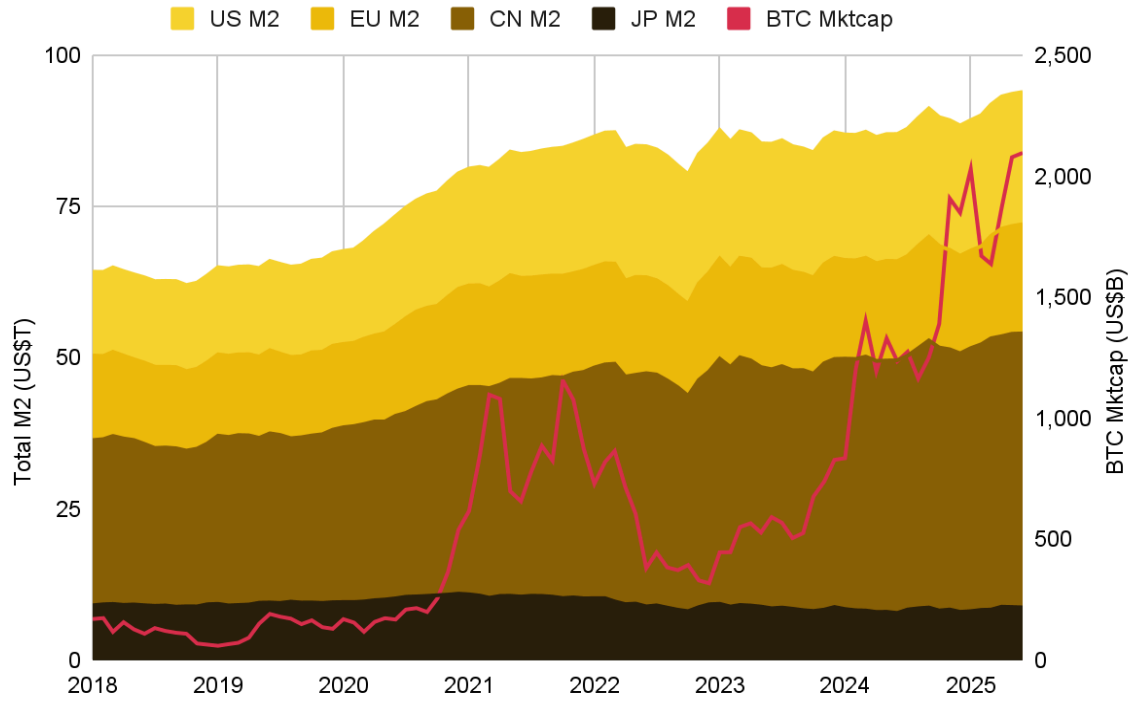
This ‘**mismatch phase**’ is often the best window for strategic positioning. The leading indicator has begun to rebound, but the weakness in economic data provides investors with the opportunity to buy quality assets at relatively low costs.

The model suggests that the coming year is a key period for gradually shifting from a defensive to an offensive stance. Although there may be volatility before the end of the

year, as expectations for an economic recovery in 2026 strengthen, assets positively correlated with the economic cycle (cyclical stocks, commodities, Bitcoin, etc.) may perform better. Historically, Bitcoin has performed well when the Manufacturing Cycle is in an expansion phase, though this is often in the mid-to-late stages, or even the end, of a bull market. Strong economic data serves as a 'confirmation' of the favorable macro environment of the past year, by which time Bitcoin's price has already fully "priced in" this development.

# 3.2 Central Bank Policies and the Liquidity Wave

**Figure 10: Global liquidity is expanding at its fastest pace in 4 years**




Source: FRED, Binance Research, as of June 30, 2025

In the first half of 2025, the global liquidity environment showed a significant expansionary trend. On one hand, the U.S. Federal Reserve gradually halted its quantitative tightening (withdrawing base money) but remained in a hawkish pause state. On the other hand, monetary policies in China, Europe, and Japan were relatively loose. Although Japan's monetary policy is transitioning from ultra-loose to normalization, officials seem very cautious and may press the pause button at any time.

Broad money reversed its contraction from the last quarter of the previous year and saw its largest 6-month increase since 2021 (+**US$5.5 trillion**). A large part of this was due to the passive inflation of the USD-denominated monetary base caused by a depreciating dollar. If calculated with a fixed exchange rate from January 2012, the G4 monetary base grew by **US$2.5 trillion** in the past six months, still the highest since mid-2024. This favorable liquidity environment has supported investor risk appetite.

**Figure 11: G4 central bank policy summary**

| Central Bank | Policy Rate (H1 2025) | Latest Policy Action | Official Stance | Core Driving Factors |
|---|---|---|---|---|
| **Federal Reserve (Fed)** | 4.50% | Paused rate cuts | Hawkish Hold | Stubborn core inflation; upside risks from tariffs |
| **European Central Bank (ECB)** | 2.00% (Deposit Rate) | Cut rates by 25bps in June | Dovish | Inflation returning to target; stagnant economic growth |
| **Bank of Japan (BoJ)** | ~0.50% | Ended negative interest rates, started normalization | Cautious/ Dovish | Rising domestic inflation; concerns about external economic risks |
| **People's Bank of China (PBoC)** | 3.45% (1-Year LPR) | Maintained easing/targeted support | Accommodative | Deflationary pressure; weak domestic demand; stabilizing growth |

Source: Bloomberg, Binance Research, as of June 30, 2025

From the monetary policy leanings of the major central banks, the Fed is engaged in a high-stakes waiting game and may not resume rate cuts until later this year when it confirms that inflation has eased, with policymakers gradually shifting to a more hawkish stance. The European Central Bank is a forerunner in the dovish turn among developed countries and is expected to maintain its expansionary policy. The People's Bank of China continues to use its unique combination of monetary policy tools to support specific sectors of the economy. Japan is inclined to continue with small interest rate hikes and may only begin to slow the pace of its bond purchase reductions next year.

# 3.3 Geopolitical Shocks and Market Sentiment: Crypto's Shifting Role

The uncertainty that worried financial market investors in 2025 was mainly centered on the impact of U.S. tariffs and concerns about fiscal sustainability.

## A Short-lived Trade War...?

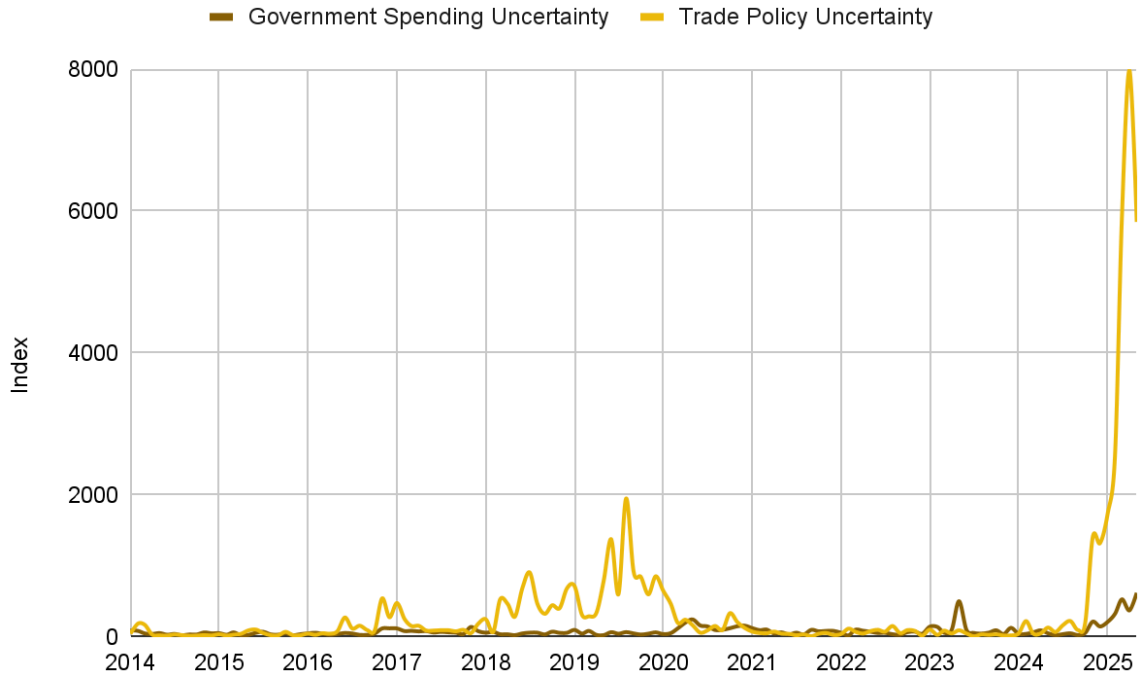
The U.S.-China trade war in the first half of 2025 was characterized by its stunning "speed" and "unpredictability," bringing severe shocks to global markets. Here is a timeline of key events:

- **February 4:** The U.S. begins to impose a 10% tariff on all Chinese imports, with China immediately announcing countermeasures.

- **April 2 ("Liberation Day"):** The U.S. announces comprehensive "reciprocal tariffs," including tariffs of up to 34% on Chinese goods.
- **April 4-11:** The two sides engage in rapid "tit-for-tat" retaliation, with tariff rates being pushed to astonishing levels in just one week—U.S. tariffs on Chinese goods accumulated to 145%, while China's retaliatory tariffs on U.S. goods rose to 125%.
- **May 12:** After negotiations in Geneva, the two sides reach a 90-day "truce" agreement. The U.S. agrees to reduce the tariffs imposed in April from 145% to 30%, while China agrees to lower its corresponding tariffs to 10%. However, a pre-existing 20% tariff remains in effect.
- **June 11:** After a new round of talks in London, the U.S. side announces a final "total of 55%" tariff on Chinese goods, while also revoking some restrictive measures against Chinese students and technology exports.
- **June 26/27:** Trade agreement signed between the U.S. & China, which includes China speeding up the supply of rare earths to the U.S.. China states that the U.S. will correspondingly cancel a series of restrictive measures against China.

In April of this year, the U.S. Trade Policy Uncertainty Index soared to a record high, far exceeding the level during the Trump administration's first term trade war in 2019. However, after a series of twists and turns, U.S. tariffs on China dropped from the "irrational" level of 145% to a "tradable" level of 30%, and the trade uncertainty index has since fallen. Yet, as concerns about "The One, Big, Beautiful Bill" rise, worries about government spending reached a new historical high in May, with fiscal issues taking over from trade as the market's next focus.

**Figure 12: After trade worries, fiscal concerns are becoming the market's next focus**




Source: Bloomberg, Binance Research, as of June 30, 2025

The evolution of this trade conflict has been full of drama and uncertainty, making it nearly impossible for some businesses to make any effective long-term plans over the

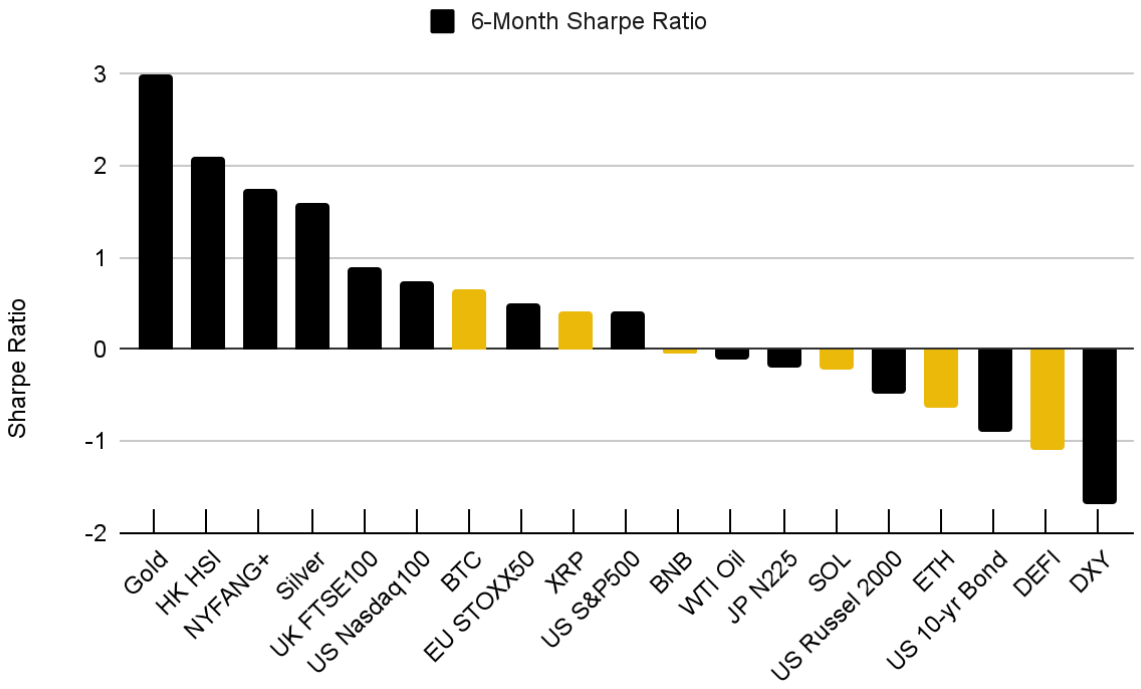
past few months. Although brief, its suppressive effect on business investment may have exceeded the cost of the tariffs themselves. Looking ahead, the risk of tariff escalation is much smaller but still exists. Since the U.S. also has tariffs on other economies to varying degrees, merely maintaining a 30% level on China may not be enough for the U.S. to achieve "manufacturing reshoring," as China's manufacturing advantages would still be prominent. Or, at least, it is unlikely that the U.S. will lower this tariff level in the foreseeable future, otherwise both its manufacturing strategy and fiscal balance would be unattainable.

From a market reaction perspective, concerns about the U.S. tariff hammer falling began in February 2025. In early April, the U.S. unexpectedly announced high tariffs on several trading partners, including China. This move immediately triggered fears of a global trade war, a stagflationary shock to the U.S. economy, and potential recessions overseas, causing a massive impact on the stock, bond, foreign exchange, and crypto markets.

Bitcoin's role demonstrated resilience amidst the volatility. It did not fall too much when risk-off sentiment was high and followed risk assets higher as sentiment recovered, making it one of the assets with a good risk-reward ratio for the year. However, assets like ETH and DeFi tokens had poor risk-reward ratios in the first half of the year due to their weaker safe-haven properties.

Specifically, measured by the Sharpe ratio, the performance of major asset classes in the first half of the year is shown in figure 13 below.

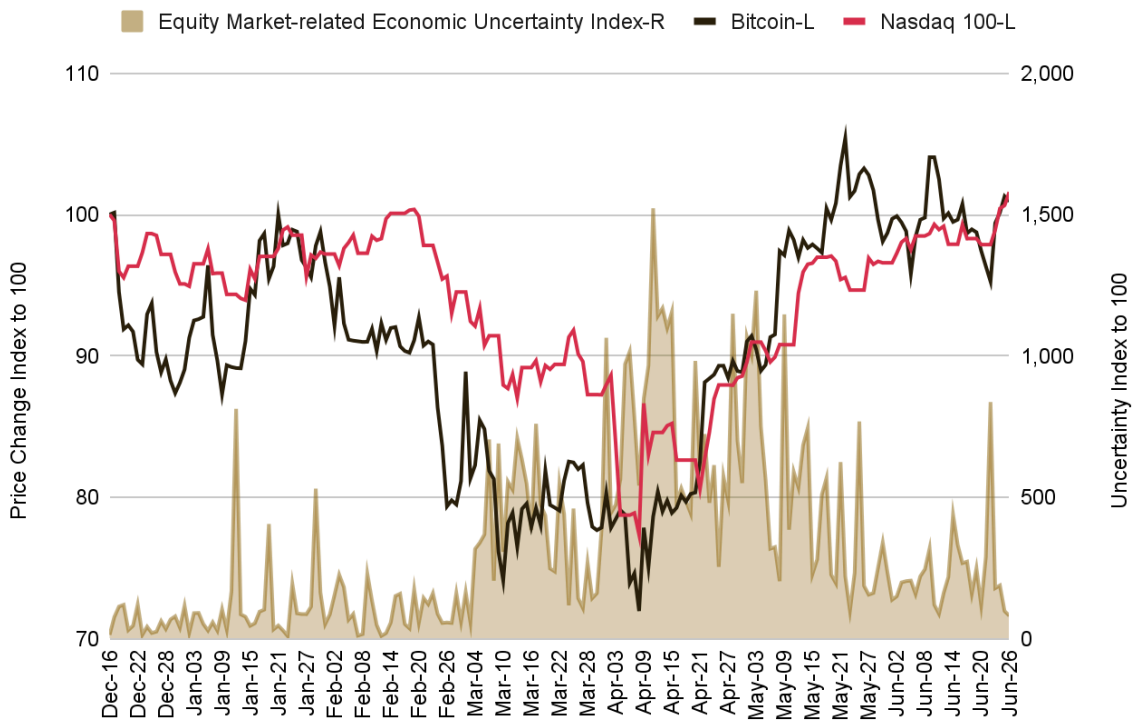
**Figure 13: Crypto's risk-reward ratio was lackluster in H1**




Source: Tradingview, Binance Research, as of June 30, 2025

## Multipolar World: A Long-Term Driver for Crypto Assets

**Figure 14: Rising Middle East conflicts triggered only short-lived market worry**




Source: Tradingview, Binance Research, as of June 30, 2025

Data from the tariff shock in April and the geopolitical shock in the Middle East in June show that BTC experienced significant declines in both instances. This implies that when there is macro risk aversion driven by geopolitical uncertainty, the market still views Bitcoin as a high-beta tech stock rather than digital gold.

However, ETFs saw net outflows only in February and March this year, with all other months recording large net inflows. This indicates that **while "hot money" flees during volatility, a base of "sticky capital" from long-term allocators is being established.** This crisis has shaken out short-term speculators but may have provided buying opportunities for long-term believers. This divergence is a hallmark of a maturing asset class and suggests that beneath the headline volatility, a more stable investor base is forming.

Whether it's the trade war or the geopolitical conflicts in the Middle East, they are occurring against the backdrop of a "structural shift" in the global power landscape. Other risks, such as election cycles in major countries, social unrest, rising protectionism, and cyber threats against critical infrastructure, collectively form a highly complex risk matrix. These signs indicate that geopolitical risk is transforming from a cyclical "tail event" of the past into a persistent, structural feature of the current market**. The world is evolving towards a multipolar, competitive, and increasingly contentious landscape.**

This structural shift has profound implications for asset allocation. Some observers note a rationale for holding non-sovereign, decentralized assets (such as Bitcoin) that are independent of any single nation's political decisions. Additionally, central banks have been increasing their gold allocation in global reserves, which can be seen as a response to dollar-related political risks. **This geopolitically influenced shift is considered by some to be a long-term factor affecting 'hard assets' and the crypto asset space.**

# 04 / Bitcoin

Bitcoin's first half is defined by new all-time highs, stronger institutional and corporate adoption, clear leadership of the broader crypto market cycle, a growing role as a macro diversifier, and early signs of deeper financialization. Beneath those headline trends, the core metrics reveal an interesting split: robust market value and network security alongside declining base-chain activity and fee revenue. Together, they highlight how Bitcoin's usage and economic model are still evolving as its position in global markets expands.

## 4.1 Key Metrics

**Figure 15: Bitcoin metric performance across half-years**

| | 31-Dec-23 | 30-Jun-24 | 31-Dec-24 | 30-Jun-25 | % change (6M) |
|---|---|---|---|---|---|
| **Market Cap (US$B)** | 827.8 | 827.8 | 1,829 | 2,125 | **16.2** |
| **Trading Volume (US$B)** | 22.8 | 22.8 | 43.6 | 62.2 | **42.7** |
| **Transactions (7DMA, K)** | 557.0 | 557.0 | 351.1 | 373.6 | **6.4** |
| **Active Addresses (7DMA, K)** | 800.1 | 800.1 | 766.4 | 717.0 | **-6.4** |
| **Average Tx Fee (US$)** | 18.4 | 18.4 | 1.9 | 1.4 | **-26.3** |
| **Hash Rate (EH/s, 7DMA)** | 508.8 | 508.8 | 796.9 | 810.2 | **1.7** |
| **Mining Difficulty (T)** | 72.0 | 72.0 | 108.7 | 125.3 | **15.3** |

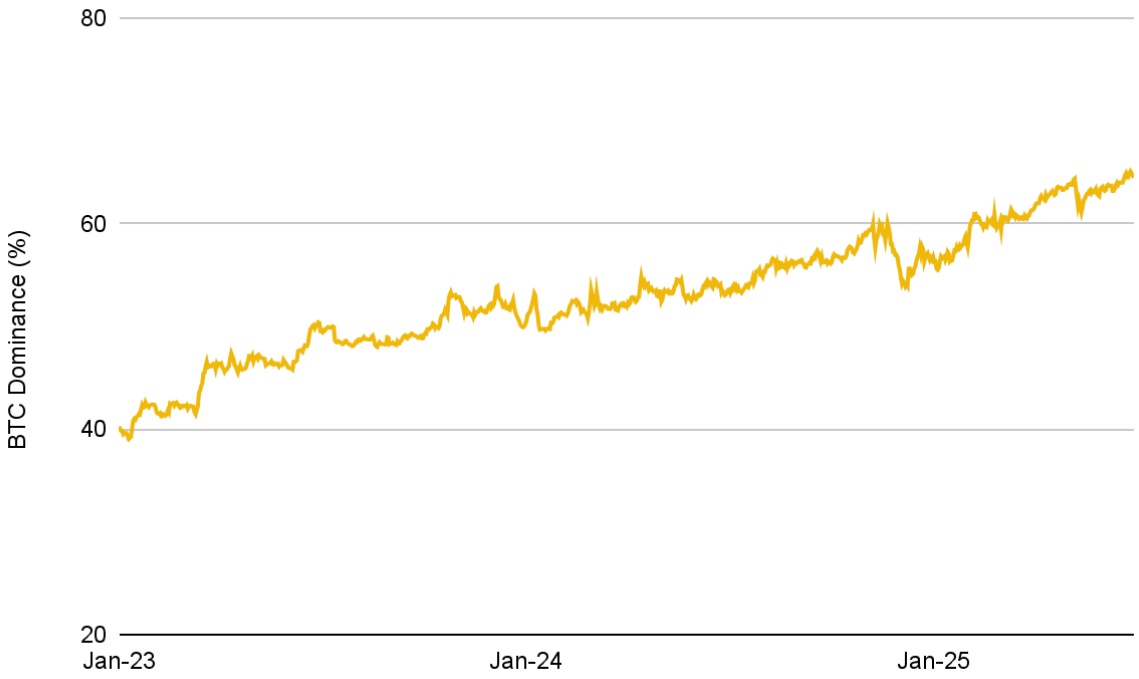
7DMA = 7-day moving average
Source: CoinMarketCap, The Block, Blockchain.com, Binance Research, as of June 30, 2025

## Bitcoin Dominance

**Bitcoin dominance has risen significantly this cycle**, with capital flowing into BTC at a faster pace than the broader crypto market. This trend reflects broader accumulation from long-term holders and retail investors, as well as Bitcoin's expanding integration with traditional finance (TradFi). Spot BTC ETFs have enabled the largest asset managers to gain direct exposure to BTC, while corporations — and even nation-states — are increasingly considering it as part of their reserve strategies.

As a reminder, Bitcoin dominance measures the relative market share of Bitcoin compared to the rest of the market. This is calculated using Bitcoin's total market capitalization (market cap) over the total market cap of all cryptocurrencies combined.

**Figure 16: Bitcoin market dominance has trended strongly upward this cycle, peaking at 65.1% in June — its highest in more than four years**



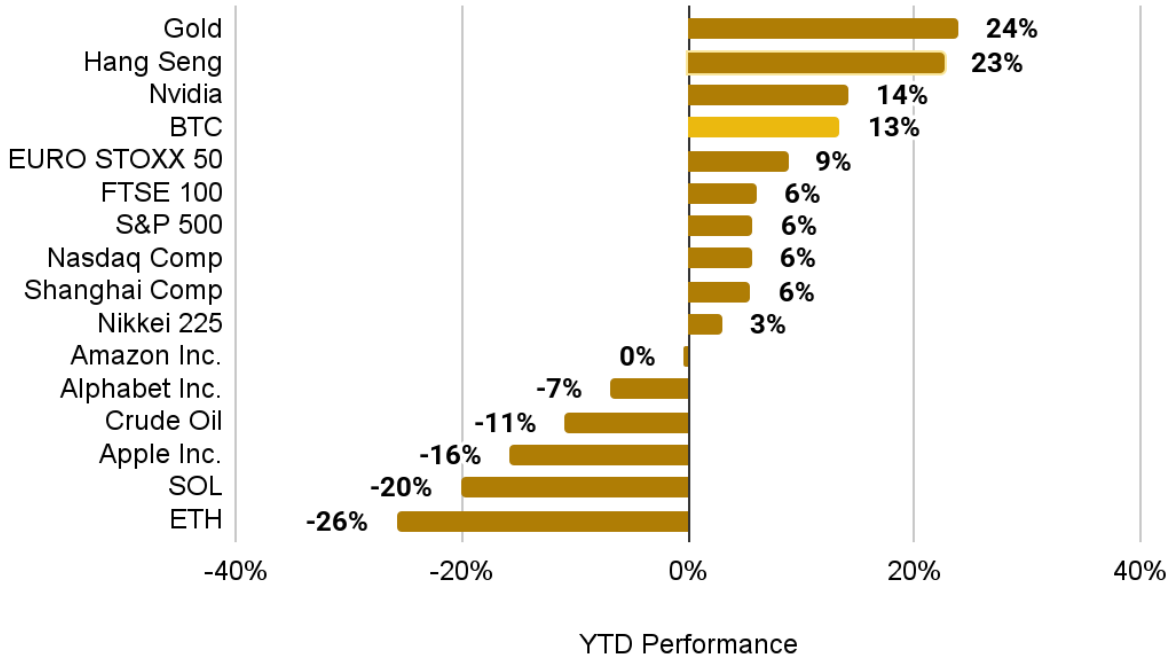

Source: CoinMarketCap, Binance Research, as of June 30, 2025

## Performance Versus Traditional Assets

Bitcoin's performance in H1 2025 continues to outpace most major traditional assets. Although BTC saw a significant correction earlier in the year from its post-election surge to all-time highs in 2024, it **ended H1 as one of the top-performing large-cap assets**, supported by macro positioning and sustained institutional flows. Gold has also seen a resurgence with a +24% return year-to-date (YTD), ahead of Bitcoin's +13%, while most major equity indices have lagged, delivering either negative or low single-digit returns.

This relative strength has reinforced not just Bitcoin's return profile, but also its place in the global asset hierarchy. Its market cap has remained above US$2T for most of H1, making it the world's sixth most valuable asset—just behind Amazon and ahead of the likes of Google, Meta, and even Silver. Holding the US$100K price level through volatile macro conditions has added both symbolic and structural weight to its standing as an increasingly mature asset class.

**Figure 17: BTC remains among the top-performing assets in a macro-volatile year**



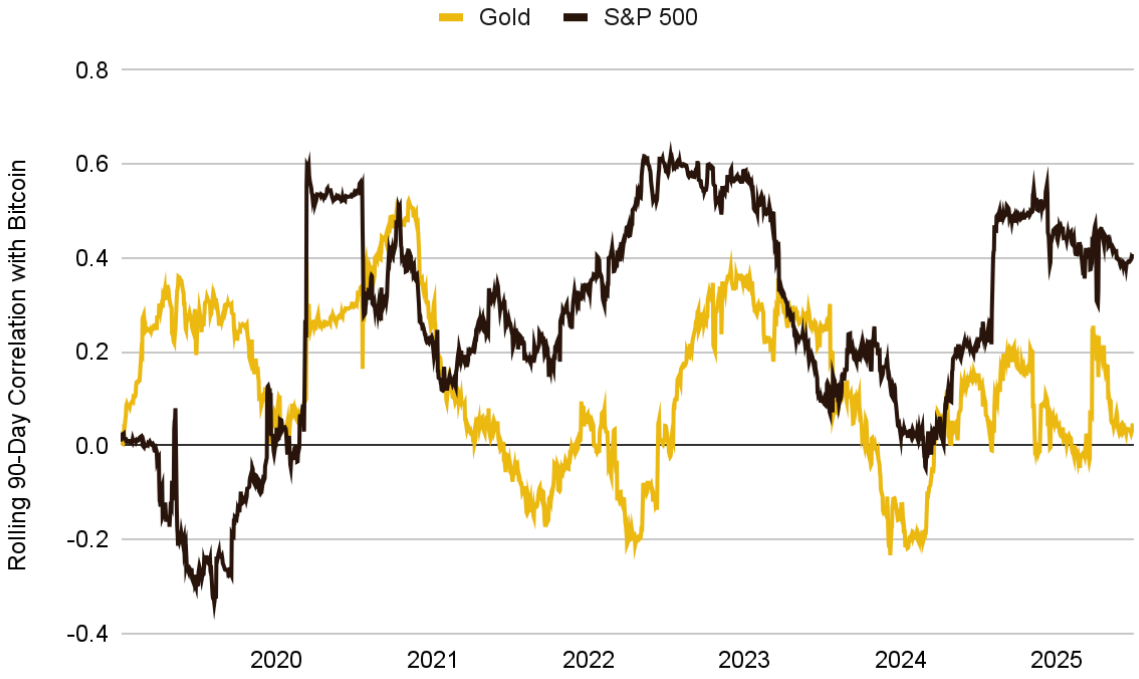

Source: Yahoo Finance, Binance Research, as of June 30, 2025

Bitcoin's correlation profile with traditional markets has also remained a key focus in 2025, particularly during periods of macro stress. In early April, for instance, the tariff shock triggered a sharp spike in Bitcoin's correlation with the S&P 500—briefly rising near 0.6—as markets moved into broad risk-off mode. But as conditions began to stabilize, Bitcoin began to decouple, showing resilience and even climbing on days when equities and commodities continued to decline.

Over a longer horizon, Bitcoin's correlation with equities (~0.26) and gold (~0.13) has remained relatively low—highlighting that while **short-term alignment occurs during macro shocks**, Bitcoin continues to assert a **more independent identity over time**. This behaviour underscores Bitcoin's evolution as a distinct macro asset: responsive to liquidity

and volatility cycles, yet structurally different from both equities and traditional hedges. While such correlation regimes are often short-lived, the current setup underscores crypto's growing role as a distinct asset—offering meaningful portfolio diversification in a landscape dominated by macro-driven positioning.

**Figure 18: Bitcoin's long-term correlation with traditional assets has remained modest, averaging just 0.26 with S&P 500 and 0.13 with gold since 2019**



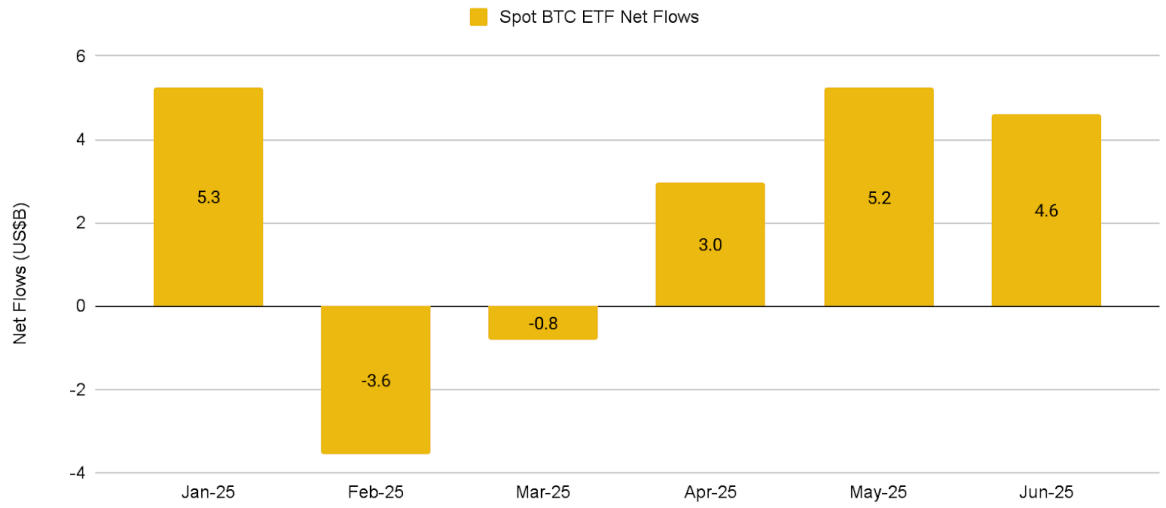

Source: TradingView, Binance Research, as of June 30, 2025

## Spot ETF

Bitcoin Spot ETFs have continued to exceed expectations, maintaining their reputation as one of the best-performing ETFs in the market. Traditional investor appetite for regulated Bitcoin exposure remains strong, with cumulative net inflows surpassing US$13.7B YTD. In fact, **only 9 out of the 26 weeks this year have seen net outflows**[8], most of which emerged as a result of the tariff-induced volatility back in February and March.

While ETF flows tend to follow broader market narratives, they've become a reliable source of structural demand — even during periods of elevated volatility. Recent inflow patterns suggest buyers are often using market pullbacks to accumulate exposure, reinforcing the view that ETFs are a strategic entry point rather than a momentum-driven trade. A growing relationship between ETF flows and Bitcoin's spot price has also become clear: inflows often coincide with rallies, while outflows precede drawdowns. As such, Bitcoin ETFs are now central to price discovery and capital allocation, with flow data emerging as a **key barometer for near-term sentiment and positioning**.

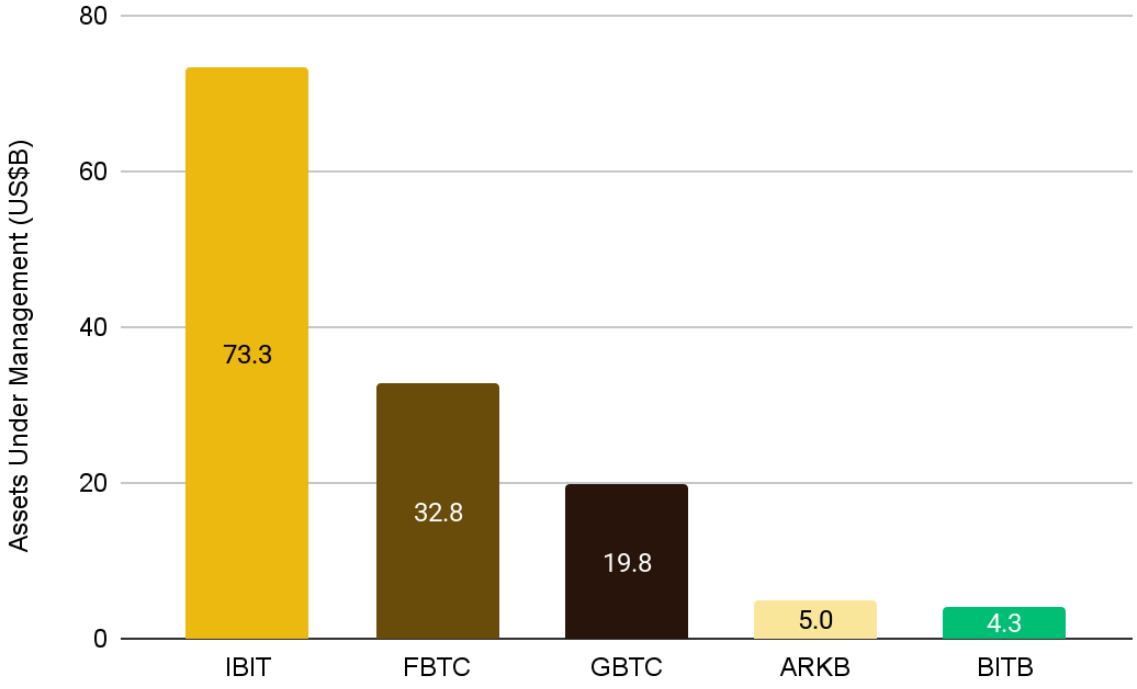
**Figure 19: Spot BTC ETFs have attracted over US$13.7B in net inflows YTD**




Source: farside.co.uk, Binance Research, as of June 30, 2025

Among issuers, **BlackRock's IBIT continues to dominate**, absorbing the large majority of net inflows in recent months as competing products face steady outflows. Grayscale's GBTC has continued to bleed assets due to its relatively high fee structure, with its lower-fee (0.15%) Mini Trust failing to reverse the tide, while the bulk of other issuers also saw largely flat activity in comparison. The data suggests that institutional capital is concentrating in the most liquid, low-fee products with dominant brand strength—reinforcing a potential **'winner-takes-all'** dynamic within the spot BTC ETF space. As flows consolidate into fewer vehicles, the market influence of these dominant ETFs is also likely to grow further.

**Figure 20: BlackRock continues to command the majority of the U.S. spot BTC ETF market by AUM**




Source: The Block Data, Binance Research, as of June 30, 2025

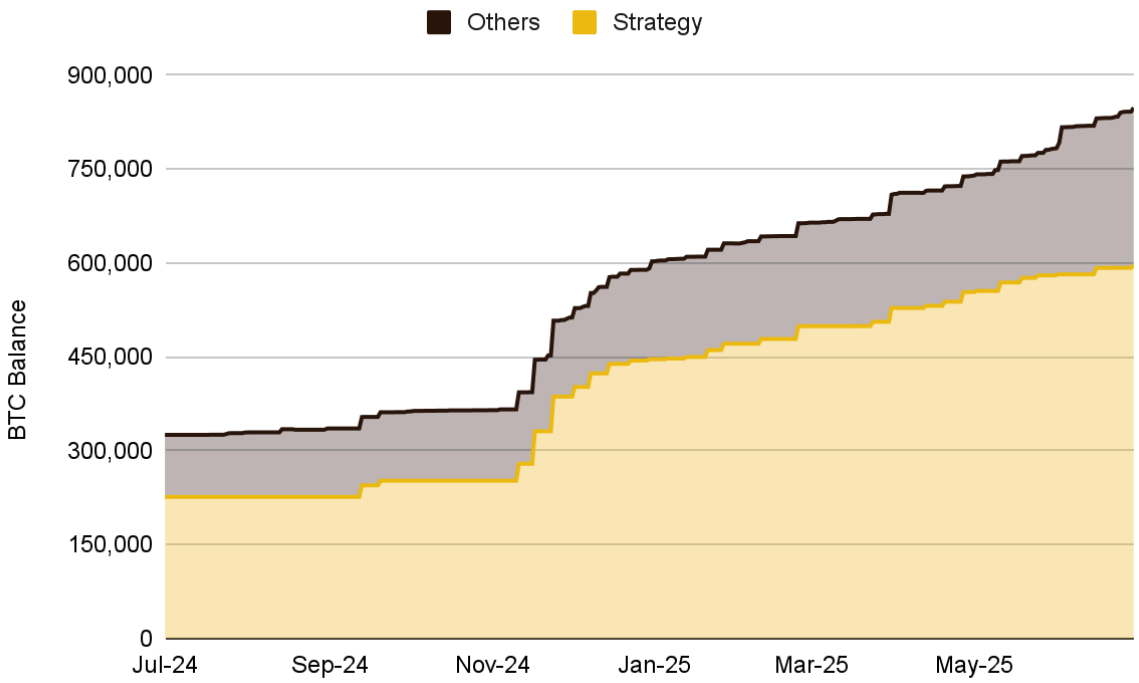
Additionally, with the regulatory landscape steadily improving, more institutions are integrating spot BTC ETFs into their product offerings. A key catalyst would be the inclusion of these ETFs on major wirehouse platforms, or within 401(k)-linked retirement products, which would significantly expand the accessible investor base. The onboarding of passive and semi-passive capital pools — still largely underexposed to crypto — could mark another structural turning point for allocation behavior.

Globally, progress in jurisdictions like the UK and Australia toward launching their own spot BTC ETFs could further amplify demand. A broader wave of international access may unlock coordinated cross-border flows, reinforcing Bitcoin's standing as a globally relevant institutional asset.

# 4.2 Corporate BTC Adoption

A key theme in 2025 has been the **growing number of public companies adding Bitcoin to their balance sheets**. As of June 30, over 140 listed firms collectively hold 848.1K BTC — up from 325.4K a year ago. While Strategy still accounts for over 70.4% of total holdings, more than 50 new companies have disclosed BTC allocations this year, with ~245.3K BTC added so far. Average monthly acquisition has exceeded 40.8k BTC, underscoring growing institutional conviction.

**Figure 21: Public company Bitcoin holdings have reached 848.1K BTC over 140 firms**




Source: Bitcoin Treasuries, Binance Research, as of June 30, 2025

The renewed momentum reflects a range of structural and market drivers. Bitcoin's record highs have reignited corporate interest, as firms seek upside potential for their balance sheets. In a macro environment marked by inflation pressure, geopolitical tension, and fiat volatility, Bitcoin is increasingly seen as both a hedge and a tool for capital efficiency. Regulatory clarity is also improving, with U.S. policymakers signaling a

lighter stance, while 2025 accounting rule changes now permit fair-value treatment[9] — eliminating impairment risks and making Bitcoin holdings more attractive from a reporting perspective.

Alongside traditional corporate adoption, a new class of firms is emerging: **Bitcoin treasury corporations**. Unlike the first wave of adopters such as Tesla or Block — who added BTC alongside core operating businesses — these entities are purpose-built around BTC accumulation as their primary mission. Firms like Twenty One, Strive Asset Management, and Nakamoto have either listed or announced plans to go public via SPACs or reverse mergers. Their strategy mimics Strategy's playbook, aiming to build shareholder value through concentrated BTC exposure rather than diversification.

This model, however, introduces new risks. Many of these firms trade at valuations heavily tied to their digital asset exposure, often at significant premiums driven by leverage, public access, or early-mover perception. As more entrants emerge, those premiums are beginning to compress, and equity prices are increasingly decoupling from Bitcoin's spot movements. The risk is most pronounced among newer players, where governance, capital planning, or risk controls may be less mature — raising questions about long-term sustainability, particularly during market drawdowns or liquidity events.

Still, the broader trend points toward continued growth. Each announcement reinforces Bitcoin's role as a legitimate treasury asset and contributes to a growing domino effect across industries. Bitwise projects that over 1 million BTC[10] could be held in corporate treasuries by 2026. The trajectory will ultimately depend on firm-level capital allocation decisions, macroeconomic developments, and the evolving regulatory environment through the remainder of the year.

# 4.3 Bitcoin Ecosystem

## Scalability

Bitcoin Layer 2s (L2s) progressed meaningfully in H1 2025, driven by a push toward more secure Bitcoin-native bridges and modular scaling frameworks. The Stacks ecosystem[11] continued to build on its Nakamoto upgrade, which introduced a new consensus layer with Bitcoin finality and unlocked programmability more closely tied to Bitcoin. This laid the groundwork toward a 10x throughput boost, development of a new Clarity virtual machine (VM) in WebAssembly (WASM), and the growth of native DeFi solutions like sBTC.

Elsewhere, BitVM also gained traction more broadly as a framework for trust-minimized off-chain computation on Bitcoin, with multiple teams publishing early proofs of concept and circuit designs. Bitlayer[12] advanced BitVM from concept to production maturity by executing live bridge transactions on Bitcoin mainnet using a BitVM2-based bridge in H1 2025. BOB[13] expanded its hybrid Bitcoin–EVM testnet and launched a BitVM-enabled bridge testnet marking another milestone for applying BitVM in practice. Botanix[14] launched its mainnet and continued refining its Spiderchain validator-based peg model. Additionally, native rollup stacks like Citrea[15] (by Chainway) advanced toward mainnet, aiming to bring zero-knowledge (ZK) rollups to Bitcoin with native BTC as gas. While all of these solutions differ in trust and execution models, they all share the goal of anchoring smart contract functionality to Bitcoin finality.

Unlike BTCFi, which focuses on the financialization of Bitcoin, L2 infrastructure developments were centered on core protocol design, new settlement pathways, and unlocking general-purpose programmability on Bitcoin. Architecturally, the move has been toward modular rollups and native fraud and validity proofs, though challenges around trustless exits, bridge security, data availability (DA), and efficient state verification remain. The broader Bitcoin L2 landscape is now more active than ever, but adoption will depend on which approach balances trust minimization, developer accessibility, and native BTC usability.

We cover Bitcoin scalability solutions in our report, **The Future of Bitcoin #3: Scaling Bitcoin.**

## BTCFi

BTCFi remains one of the **highest-traction on-chain use cases for BTC**, reflecting the growing appetite for DeFi within the Bitcoin ecosystem. Although TVL has remained relatively flat YTD, it is still up over 550% year-on-year (YoY), increasing from under US$1B to US$6.5B. This growth has propelled Bitcoin into the top four DeFi ecosystems by TVL, as BTC holders increasingly explore ways to generate yield or access liquidity—whether through lending, financing, or structured products.

**Figure 22: BTCFi TVL has grown by over 550% in the past year, climbing from under US$1B to US$6.5B**


Source: DefiLlama, Binance Research, as of June 30, 2025

Several key developments accompanied this growth. Within the Stacks ecosystem, sBTC continued to progress through early pilots, positioning it as a trust-minimized two-way BTC bridge that could unlock new use cases such as lending, derivatives, and vault strategies. Rootstock[16] (RSK) also saw a jump in activity following protocol fee reductions and product improvements across platforms like Sovryn and ALEX. Elsewhere in BTCFi[17],

cross-ecosystem bridges began making it easier for BTC to flow into other networks, while BTC-backed stablecoins (e.g., USDA, DOC) gained traction as native collateral options.

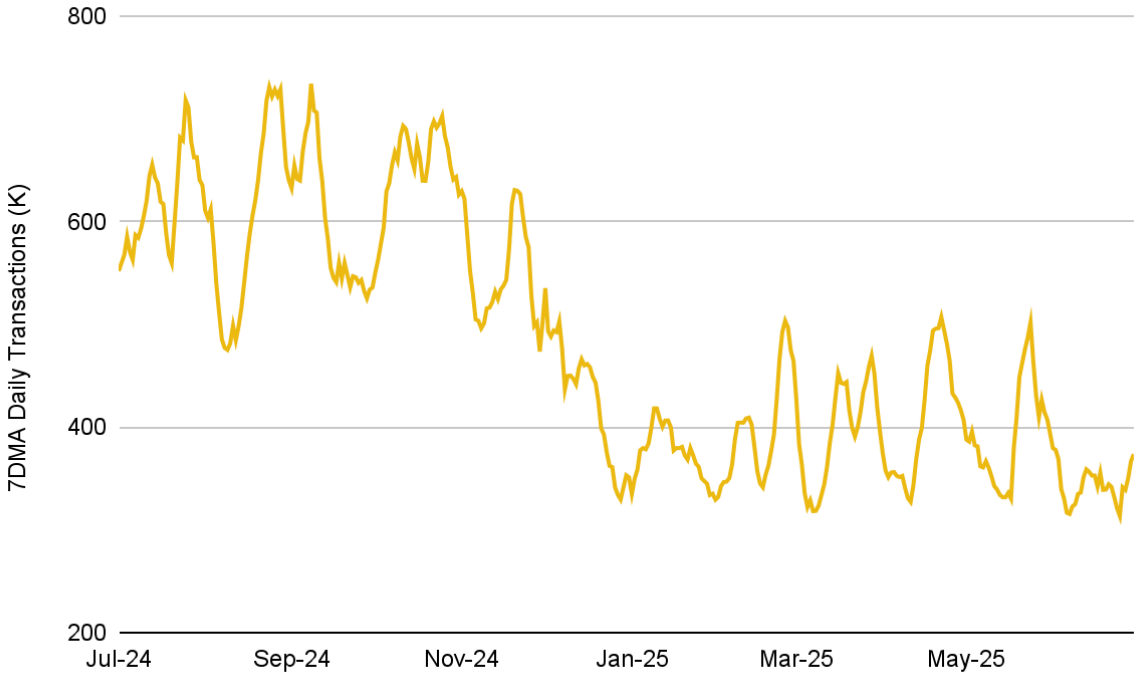
Institutional interest also continued to build gradually, with some custodians exploring how to integrate compliant access to emerging BTCFi use cases. While most spot ETFs and corporate treasuries still hold BTC in traditional cold storage, early pilots could lay the groundwork for more direct on-chain engagement over time. This comes as demand for Bitcoin from TradFi firms like Franklin Templeton continues to grow through spot ETFs, though direct engagement with BTCFi use cases remains limited so far.

Despite this, **less than 1% of total BTC supply is currently deployed in DeFi**. That gap underscores the untapped potential of BTCFi. As broader demand for Bitcoin has accelerated this year—reflected in its dominance, ETF inflows, and renewed corporate adoption—BTCFi remains one of the most underutilized areas of the Bitcoin economy. With institutional interest rising and regulatory clarity improving, the opportunity to unlock dormant Bitcoin liquidity and enhance capital efficiency is becoming harder to ignore. For more details, check out our report, **The Future of Bitcoin #4: DeFi**.

## Native Assets and Token Standards

Bitcoin has seen waves of on-chain token experiments over the past few years — from Ordinals NFTs to BRC-20 and Runes — but H1 2025 data confirm the speculative rush has faded. Daily transaction counts have dropped to ~300–375k, an 18-month low and less than half the >700k daily average at the peak of last summer's Ordinals mania. This cooldown reflects the **unwinding of the inscription craze and the Runes market surge** that briefly crowded Bitcoin's block space.

**Figure 23: Bitcoin's 7DMA daily transactions have been on a steady downward trajectory, now at a recent low of ~373.7k**

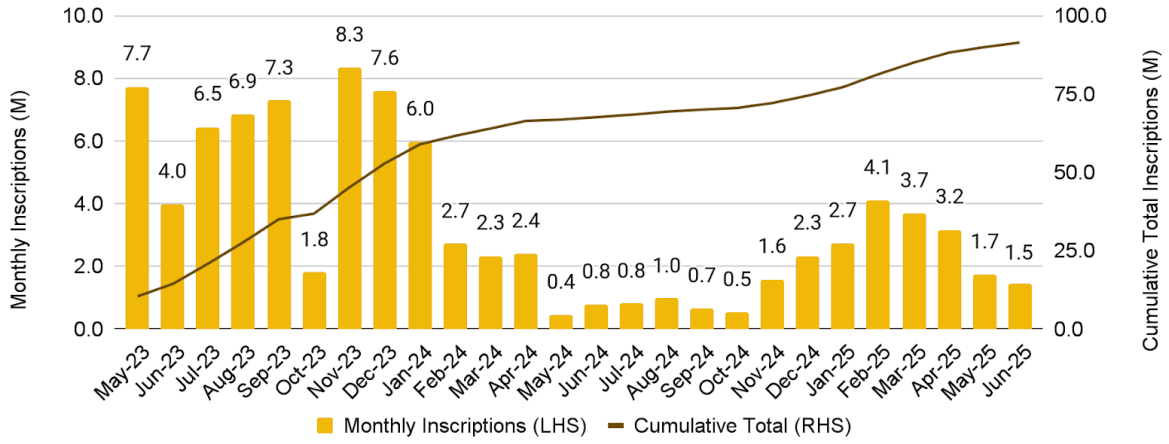



Source: The Block, Binance Research, as of June 30, 2025

The boom and bust of Inscriptions, Runes and BRC-20 explain much of Bitcoin's on-chain traffic slowdown in the first half of 2025:

- **Ordinals**: After driving one of Bitcoin's biggest transaction surge in prior years, Ordinals (NFT-like inscriptions) activity has dropped sharply in H1 2025 as the minting hype wanes and top collections trade on thinner liquidity. While new collections continue to launch, most volume now comes from a smaller base of dedicated collectors, not a broader retail frenzy.

**Figure 24: Monthly Bitcoin inscriptions saw a brief upsurge in Jan–Feb 2025 but remain on a downward trend, staying well below 2023 highs**

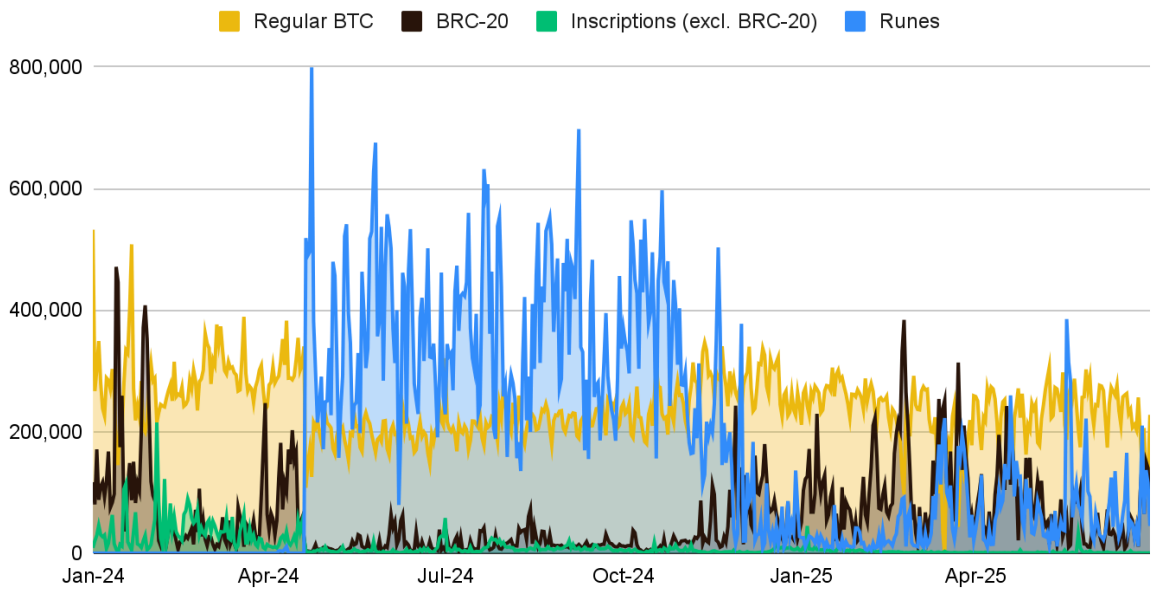



Source: Dune Analytics (@dgtl_assets), Binance Research, as of June 30, 2025

- **Runes and BRC-20**: Runes — a fungible token standard launched in April 2024 — quickly dominated block space, at one point making up ~68% of all Bitcoin transactions and driving fees as high as ~1,000 sat/vByte. However, usability challenges and shifting user interest caused activity to fade fast: daily Runes transactions now sit in the low tens of thousands, accounting for just 35% of BTC transactions, far below last year's peak. BRC-20 token usage has similarly cooled, with minimal sustained activity.

Most new blocks in early 2025 are **simple BTC transfers**, with inscriptions and runes now making up a much smaller share of activity than last year. This decline has also eased fee pressure: average Bitcoin transaction fees are down ~26.3% since the start of 2025.

**Figure 25: Bitcoin transaction share has shifted back to regular BTC as Inscriptions, Runes and BRC-20 have declined**




Source: Dune Analytics (@murchandamus), Binance Research, as of June 30, 2025

Ultimately, what hasn't helped is that Ordinals, Runes, and BRC-20 each operate as separate token standards with no shared infrastructure or unified liquidity layer. This fragmentation creates a fractured experience for users and developers, limiting network effects and contributing to reduced usage.

Moreover, a large proportion of Bitcoin-native assets have remained overwhelmingly speculative. Tokens like ORDI (the first major BRC-20 linked to Ordinals) and SATS (BRC-20) saw wild swings (>90% drawdowns) after initial hype. No widely adopted applications have yet emerged beyond collectibles and memecoins. While various next-generation designs continue to develop as part of Bitcoin's broader native chain usability push, it is more likely that sustainable, non-speculative adoption will come from the ongoing progress in L2s — and their enablement of more robust use cases like BTCFi — though their long-term impact is still to be seen.

To learn more about this topic, check out our report: **The Future of Bitcoin #2: Tokens**.

## Miners and Emerging MEV

The first half of 2025 tested the revenue resilience of Bitcoin miners, driving a shift in how income streams evolve post-halving. Total network hashpower held steady through June, with **mining difficulty climbing by over 6.5%**[18] and hash price oscillating as fee income fluctuated. As noted earlier, the burst of activity from Ordinals and Runes inscriptions in prior cycles briefly boosted fees to meaningful levels — at peak, contributing a significant share of miner revenue — but the sharp cooldown this year has put renewed pressure on miner margins.

With base layer fees declining alongside lower inscription and Runes usage, **miners are increasingly exploring new ways to diversify their income**. One example is merge-mined sidechains like RSK, which remain among the few direct supplements to Bitcoin miner revenue today. Merge mining lets Bitcoin miners secure RSK simultaneously without extra energy or hardware, earning additional rewards while extending Bitcoin's security model to the sidechain.

Earlier this year, RSK's[19] merged mining operations expanded significantly after onboarding Foundry (the world's largest Bitcoin mining pool) and SpiderPool (the sixth-largest). This pushed Rootstock's total merged mining hashpower to over 740 EH/s, representing nearly 80% of Bitcoin's total network hashpower by pool affiliation. While the resulting fee contribution remains modest, RSK shows how L2s can provide one path for miners to diversify revenue beyond base layer fees — though much depends on sustained usage plus continued operational improvements (e.g., Lovell fork) and lower gas costs to encourage activity.

Meanwhile, other BTC-related L2 and off-chain developments — such as Lightning or BTCFi — largely bypass miner income. Lightning fees flow to node operators, while BTCFi staking yields are paid off-chain. This has renewed interest in areas like Bitcoin-native yield and miner extractable value (MEV). On the yield side, the goal is to design a trustless and competitive staking model that avoids the workarounds common in current solutions. On the MEV side, the idea is that miners could capture additional fees by prioritizing transactions — for example, bundling large inscriptions or responding to oracle updates — though true MEV extraction on Bitcoin remains minimal compared to Ethereum. Separately, early pilots are emerging that target miner incentives through other means: projects like Bitlayer's BitVM framework aim to enable trust-minimized smart contracts that feed more on-chain activity (and fees) back to miners.

Ultimately, the income mix still depends heavily on the block subsidy. Without more sustainable base layer demand, inscriptions and MEV experiments alone are unlikely to reshape miner economics in the near term. The next six months will show whether more robust fee markets can develop — or whether Bitcoin miners will remain primarily reliant on the subsidy and cyclical bursts of block space demand.

## Development Tracks

Several development tracks for expanding Bitcoin's design space continue to unfold — ranging from more formal proposals like CTV and OP_CAT to early-stage experiments such as BitVM2, ZeroSync, and informal improvements to the BRC-20 framework (often described as 'BRC-2.0'[20]). While not all have formal specs or have reached the BIP stage, these initiatives reflect ongoing efforts to broaden Bitcoin's utility in programmability, scalability, and interoperability, and to move beyond simple transfers.

**Figure 26: Examples of Bitcoin ecosystem initiatives with active development or testing in H1 2025**

| Proposal | Title | Summary | Status |
|---|---|---|---|
| BIP-119 | CheckTemplateVerify (CTV) | Introduces covenants by adding spending constraints for congestion control and native vaults | Active dev interest in H1 2025; no finalized soft fork proposal |
| BIP-347 | Enable Concatenation Opcode | Re-enables OP_CAT to support byte concatenation and more expressive smart contracts | Formal BIP since April 2024; resumed testing in H1 2025 |
| BitVM2 | Bitcoin Virtual Machine v2 | Off-chain verifiable computation using fraud proofs, expanding Bitcoin's contract capabilities | Whitepaper released Feb 2025; developer experimentation ongoing |
| ZeroSync | zk-Proof Node Sync | Syncs full Bitcoin nodes via zk-proofs, reducing trust and bootstrapping time | Devnet live since Apr 2025; broader testing underway |

*The table is not intended to be a comprehensive list of all Bitcoin development initiatives
Source: Binance Research

# 05 / Protocol Layer

Looking at top-line metrics for Layer 1s (L1s) in H1 2025, **distinct growth paths** are evident. Ethereum remains the clear leader in market cap and DeFi TVL, maintaining its dominance despite shifting market conditions. BNB Chain has extended its lead on raw activity metrics this half-year, surpassing Solana in Decentralized Exchange (DEX) volumes and active addresses for several consecutive months, while Solana remains the chain with high throughput and continues to attract large capital inflows. Developer trends have held steady: Ethereum's ecosystem still commands the largest base, Solana remains roughly half its size, and BNB Chain and Sui have seen moderate developer growth, both surpassing Avalanche. Tron's developer base remains comparatively small, but it once again posted the highest protocol revenue in H1 2025, driven by its stablecoin settlement volume, which remains the largest among major chains.

**Figure 27: Summary of key metrics for major L1s as of the end of H1 2025**

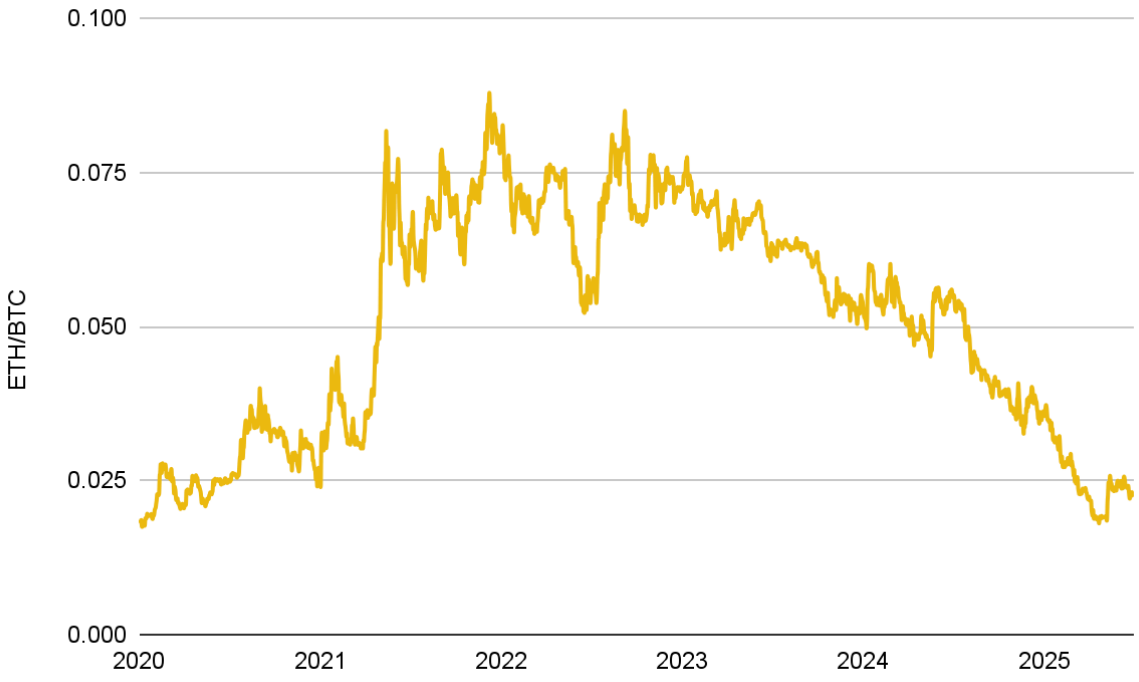
| | Ethereum | Solana | BNB | Tron | Avalanche | Sui |
|---|---|---|---|---|---|---|
| **Market Cap (US$B)** | 297.2 | 81.0 | 91.9 | 26.3 | 7.6 | 9.4 |
| **Trading Volume (US$B)** | 15.4 | 4.2 | 1.5 | 0.4 | 0.3 | 0.9 |
| **2025 Revenue (US$B)** | 0.21 | 0.17 | 0.012 | 1.9 | 0.003 | 0.006 |
| **Daily Txs (M)** | 1.4 | 328.6 | 16.6 | 8.8 | 1.3 | 10.9 |
| **Daily Active Addresses (M)** | 0.4 | 3.3 | 4.4 | 2.5 | 0.04 | 0.3 |
| **Average Tx Fee (US$)** | 0.618 | 0.004 | 0.03 | 1.3 | 0.005 | 0.006 |
| **Staking Ratio** | 29.6% | 66.5% | 21.1% | 44.1% | 45.9% | 76.4% |
| **Total Developers (as of June 30, 2024)** | 7,661 | 4,223 | 615 | 306 | 538 | 1,190 |
| **DeFi TVL (US$B)** | 61.4 | 8.6 | 6.0 | 4.6 | 1.5 | 1.8 |

Source: CoinMarketCap, Token Terminal, Block Explorers, stakingrewards.com, Electric Capital, DeFi Llama, Binance Research, as of June 30, 2025

# 5.1 Ethereum

Ethereum has had a mixed start to the year, which has been reflected in ETH's price performance. Although momentum picked up after April, ETH remains on an overall downward trend, falling ~26% this year, **underperforming other blue-chip digital assets** and the broader market. As the largest smart contract platform, Ethereum faces higher market expectations, which disproportionately puts pressure on ETH as an asset, especially since it is more **o**ften benchmarked against BTC than against other altcoins. With BTC continuing to dominate mind share in this cycle, the ETH/BTC ratio has slid to multi-year lows in H1 2025.

**Figure 28: ETH/BTC ratio slid to 0.023, marking multi-year lows in H1 2025**



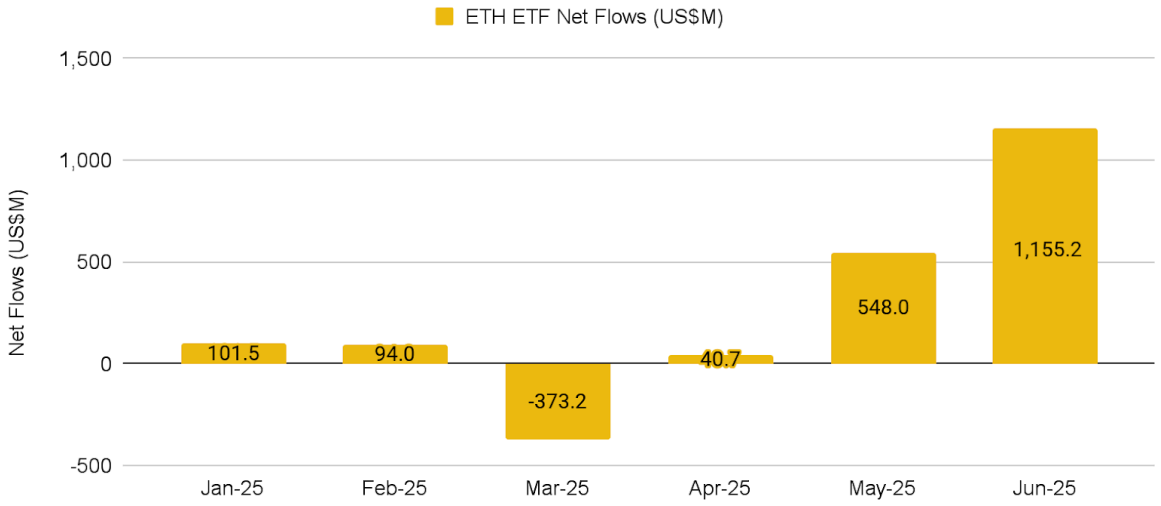

Source: Glassnode, Binance Research, as of June 30, 2025

## A New Phase for Institutional ETH Demand

H1 2025 marked a **distinct shift in Ethereum's institutional profile**, with growing engagement across regulated investment products, staking guidance, and early signs of corporate treasury adoption.

U.S.-listed ETH ETFs saw particularly strong momentum in this period. Between May and June, spot ETH ETFs recorded a 19-session streak of inflows[21] — the longest on record — with over US$1.3B added during that period. YTD net inflows surpassed ~US$1.5B, with BlackRock's ETH Trust contributing a large majority of flows. While inflows spanned a range of participants — including advisors, hedge funds, and even pension funds — the data suggests **improving market appetite for ETH exposure through regulated vehicles**.

**Figure 29: Spot ETH ETFs have attracted more than US$1.5B in net inflows so far this year, with the bulk coming in May and June**




Source: Glassnode, Binance Research, as of June 30, 2025

This trend was further supported by progress on the regulatory front. In May, the SEC's Corporation Finance division clarified that **protocol-level staking** — simply locking ETH to help secure a proof-of-stake (PoS) network — **does not constitute a securities offering**[22]. This marked a meaningful win for the ecosystem, helping separate Ethereum's native staking mechanics from the SEC's enforcement stance on staking-as-a-service platforms. However, the SEC did delay approving any ETH staking-yield ETFs in H1 (e.g., it postponed a decision on Bitwise's proposal to add staking to their ETH ETF on May 21[23]).

Separately, Ethereum made **significant move**s **onto public U.S. company balance sheets** this year. In May, SharpLink Gaming—a NASDAQ-listed firm—adopted an ETH-centric treasury strategy, raising capital and holding ~188,478 ETH (~US$470M)[24] by late June. The company staked its entire holdings, effectively viewing ETH not just as a balance sheet asset but as a yield-generating reserve. BTCS Inc[25]., one of the earliest public companies to hold ETH, also increased its holdings with smaller additional allocations through Aave, bringing its total to around 14,600 ETH (~US$36.5M). These moves reflect early examples of ETH being treated as a productive treasury asset, with staking-based cash flows offering a differentiator from Bitcoin's passive holding appeal.

## Pectra Upgrade

Ethereum executed its most significant technical upgrade since the Merge. The 'Pectra'[26] hard fork went live on May 7, introducing multiple improvements across Ethereum's execution and consensus layers. Pectra's headline changes focused on staking, blobs (data throughput) and account abstraction.

### Staking

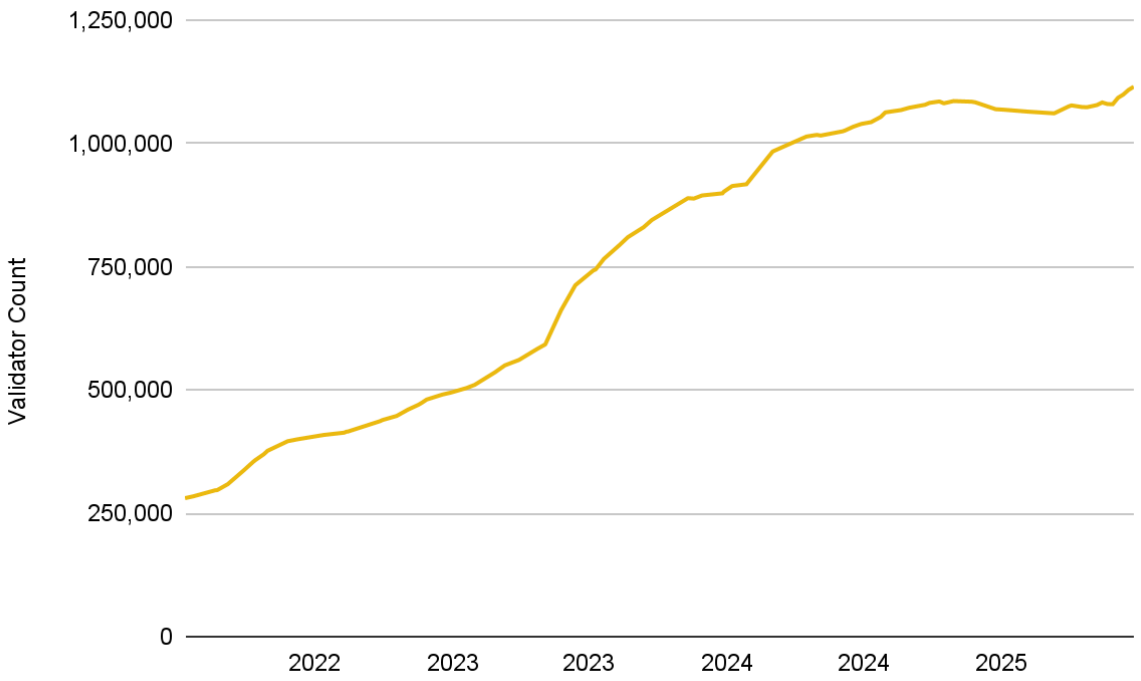
EIP-7251 **raised the maximum effective balance (MaxEB) from 32 ETH to 2,048 ETH**, allowing large stakers—like exchanges and institutions—to consolidate into fewer validators. This reduces the operational burden of running thousands of validator instances and cuts down network overhead. This has so far resulted in a positive impact in Ethereum's on-chain staking metrics: total staked ETH has climbed to a record 35.4M (~29.3% of supply), with **over 500,000 ETH added in the first half of June itself**. This points to rising conviction in ETH's yield potential and network security, while further reducing its market liquid supply.

**Figure 30: The amount of staked Ethereum has reached a new high of 35.4M ETH, which represents about 29.3% of the current circulating supply**


Source: Beaconchain, Binance Research, as of June 30, 2025

Under the previous 32 ETH cap, large entities had to run thousands of validators to stake their full balance efficiently. While this led to over 1M active validators on the network, much of that growth came from a small number of participants, meaning the **appearance of decentralization didn't reflect the true stake distribution**. Moreover, rewards above 32 ETH couldn't compound and were redirected to the execution layer, adding further inefficiency.

**Figure 31: The number of validators on the beacon chain has been steadily increasing since the switch to PoS consensus**




Source: Dune Analytics (@hildobby), Binance Research, as of 30 June, 2025

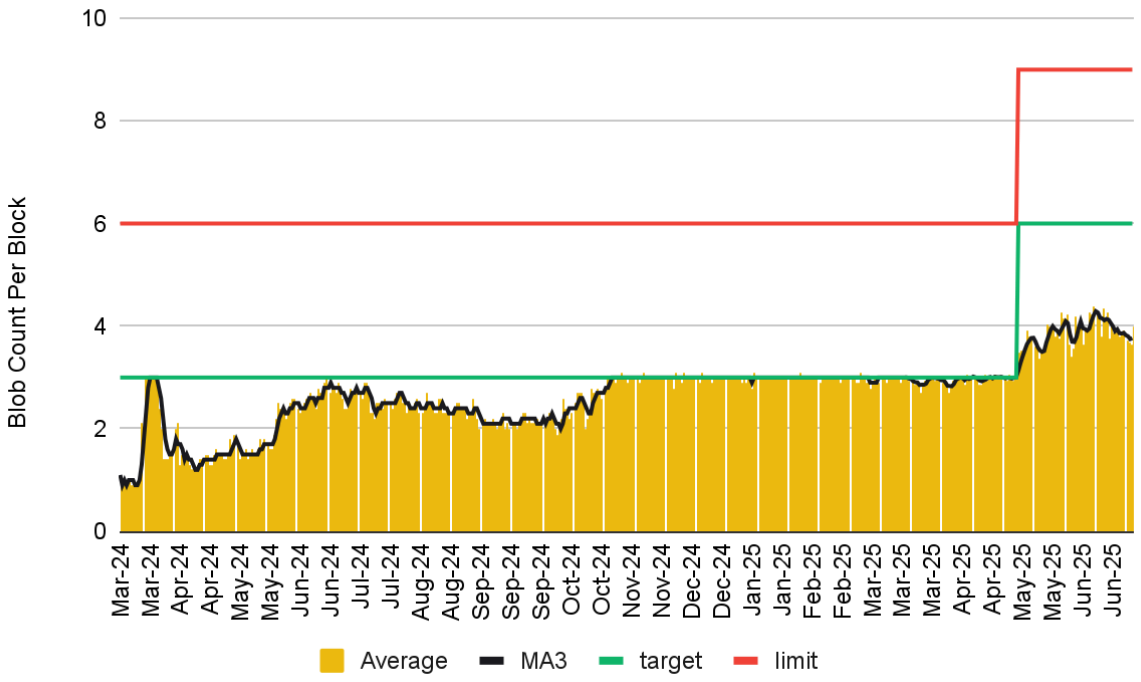
Beyond efficiency, consolidation is becoming technically necessary. A large validator set increases message volume, slows attestation aggregation, and reduces rewards for delayed responses. It also raises bandwidth needs — Geth now recommends at least 25 MB/s and unlimited data — making solo staking less feasible. Future upgrades like single slot finality become harder to implement at this scale. To address this, EIP-7514 capped validator activations per epoch, while EIP-7251 encouraged active consolidation. If the top 20 stakers consolidate under MaxEB, the network could shed ~785,000 validators — reducing load, improving performance, and making Ethereum more upgrade-ready.

**Blobs**

EIP-7691 **increased Ethereum's blob capacity** by raising the **target from 3 to 6** and the **maximum from 6 to 9** blobs per block. This expansion has already gone into effect and was designed to relieve persistent congestion in Ethereum's blob space, primarily used by rollups to post data back to L1. Since the launch of EIP-4844, Ethereum's average blob usage had consistently hovered near the 3-blob target, leaving little headroom. This created undesirable behavior, as L2s delayed posting data to avoid higher blob fees, weakening the timeliness and security guarantees of rollup transactions.

Post-upgrade, the increase in capacity has helped mitigate this issue. Early data shows blob fee volatility has declined, and blocks more regularly accommodate 4–6 blobs without price spikes. Several major rollups, including Base, Arbitrum, and OP Mainnet, have shortened their data posting intervals, improving L2-to-L1 finality and reducing latency for end users.

**Figure 32: Raising blob capacity has let L2s post more data per block, lifting prior constraints and enabling higher sustained usage without fee spikes**




Source: Dune Analytics (@hildobby), Binance Research, as of 30 June, 2025

L2s are the clear beneficiaries of this adjustment. More available blob space lowers the cost and frequency risk of posting data, which translates into cheaper and more reliable user transactions. However, this shift also introduces a trade-off: with reduced blob fees, Ethereum L1 collects less revenue from rollup activity, which may dampen long-term value accrual to ETH unless offset by higher overall usage.

Looking ahead, there are plans to expand blob capacity further. Vitalik Buterin[27] has even suggested increasing the target to 48 and the maximum to 72 blobs per block as part of the upcoming Fusaka upgrade. These specifications are expected to be tested on devnets, with the goal of scaling Ethereum's data throughput without compromising affordability.

**Account Abstraction**

EIP-7702 **extended account abstraction features** to existing Ethereum wallets without requiring full migration to smart contract accounts. The upgrade allows Externally Owned Accounts (EOAs) to temporarily attach executable smart contract code during a transaction, enabling features like passkey authentication, bundled transactions, gas sponsorship, spending limits, social recovery, among others. In practical terms, users can now do things like pay gas fees in stablecoins or set up multi-step transactions in one go, greatly improving wallet user experience.

Unlike ERC-4337, which requires users to adopt entirely new wallets, EIP-7702 lets users retain their existing addresses — preserving on-chain history and lowering friction for adoption. The change significantly improves user and developer flexibility. Users now

benefit from a smoother and more secure wallet experience, while developers can build enhanced UX features without needing users to switch wallets. It also opens the door for broader adoption of account abstraction across the ecosystem.

For further details, check out our recent report on this topic, Pectra and Fusaka Upgrades: What does it mean for Ethereum?

## Strategic Restructuring and Direction

The Ethereum Foundation (EF) undertook a significant set of changes in H1 2025 across its leadership, treasury policy, strategic priorities, and broader protocol direction. These changes reflect a response to rising competitive pressures, internal calls for greater transparency, and a need to **align ecosystem coordination** with **long-term value accrual**.

- **Leadership and Governance Shift**: In Q1 2025, the EF shifted from a single executive model to a dual leadership structure. The new structure separates strategic oversight from operational and technical execution responsibilities. This move follows growing criticism from the broader Ethereum community about the Foundation's slow reaction speed and lack of clear internal structure. The updated governance model aims to decentralize decision-making within the EF while improving transparency and coordination across development teams, external stakeholders, and protocol stewards.

  This structural shift comes against the backdrop of Ethereum's so-called prioritization dilemma — whether to focus resources on scaling L2s and competing with alternative data availability layers, or to strengthen the L1 execution layer to rival alt-L1s. While the new model does not resolve this strategic tension, it introduces a clearer separation of responsibilities, which may help the ecosystem better navigate competing priorities going forward.

- **Treasury Policy**: In June 2025, the EF released its first formal treasury policy — a notable shift away from discretionary ETH sales. The policy aims to bring transparency and a more structured approach to treasury management and sets the following:

  - A 2.5-year fiat runway for core operations, with a glide-path to reduce over time
  - A 15% annual spending cap on treasury assets, tapering toward ~5% in the long term
  - Conservative ETH deployment into audited, permissionless DeFi protocols and tokenized real-world assets (RWAs)
  - Clear liquidity thresholds that determine when ETH is converted to fiat

  This framework allows EF to retain ETH exposure while generating yield without risking protocol integrity. All ETH-denominated yield is also now earmarked for reinvestment into Ethereum-native public goods and infrastructure. Overall, EF's new governance restructuring and treasury policy suggest there is a renewed focus to strengthening the base layer.

- **Value Accrual**: A recurring challenge for Ethereum has been aligning long-term protocol priorities with sustainable value capture at the base layer. As we alluded to in our prior report, the shift to a rollup-centric ecosystem has dramatically improved network scalability but has also diluted Ethereum's direct fee intake and weakened the economic role of ETH on L1. With L2s handling execution and posting minimal fees for blob storage, Ethereum is increasingly functioning as commoditized infrastructure without guaranteed economic feedback loops.

  For now, it seems Ethereum is largely committed to the L2 scaling roadmap, though there are ongoing discussions around the need to rebalance L1 value capture and preserve Ethereum's sovereignty. This tone shift has aligned with upgrades like Pectra and Fusaka that, while enabling L2 scalability, also include direct L1 enhancements — such as validator consolidation, Ethereum Object Format (EOF) for Ethereum Virtual Machine (EVM) upgrades, and account abstraction improvements — indicating a broader intent to reinforce Ethereum's base layer.

  In a blog post, Vitalik Buterin discussed this dynamic and priorities for Ethereum going forward on retaining and accruing value.

  These centered on four strategic levers:

  - Reinforcing ETH as the default cross-layer asset
  - Encouraging L2s to pay a share of fees in ETH
  - Recalibrating the blob fee market
  - Enabling based rollup architectures that return MEV and sequencing fees to L1

Of these, the third has gained the most traction so far this year. Discussions around repricing blobs have intensified following evidence that L2s are batching too efficiently — delivering scale but eroding L1 fee capture and pushing ETH issuance back into inflationary territory[28]. However, the risk of driving L2s to cheaper DA alternatives has made this a delicate balancing act.

Value flow comparisons across L2s have also shaped Ethereum's priorities. While large general-purpose rollups like Base or Arbitrum contribute relatively little to the L1 despite high data usage, based rollups like Taiko have shown a disproportionately high fee contribution. This has renewed interest in architectures that embed sequencing on Ethereum L1, though adoption remains early-stage. Meanwhile, **Ethereum's reliance on L2 alignment for economic reciprocity** — whether through native ETH fees, staking integration, or DA loyalty — continues to be an open-ended challenge, with no enforceable mechanism in place.

Overall, Ethereum's priorities in H1 2025 have had a large focus on securing long-term economic relevance. Ensuring that ETH retains monetary primacy and that the Ethereum L1 remains a meaningful outlet for network fees is now central to protocol discussions — not just as a monetary concern, but as a matter of long-term sovereignty in an increasingly competitive L1 ecosystem.

## Fusaka by Year-End

The Fusaka upgrade follows Pectra and is expected to launch by the end of 2025. While the scope of upgrades is still under discussion, it is likely to focus on two major improvements: PeerDAS and EOF.

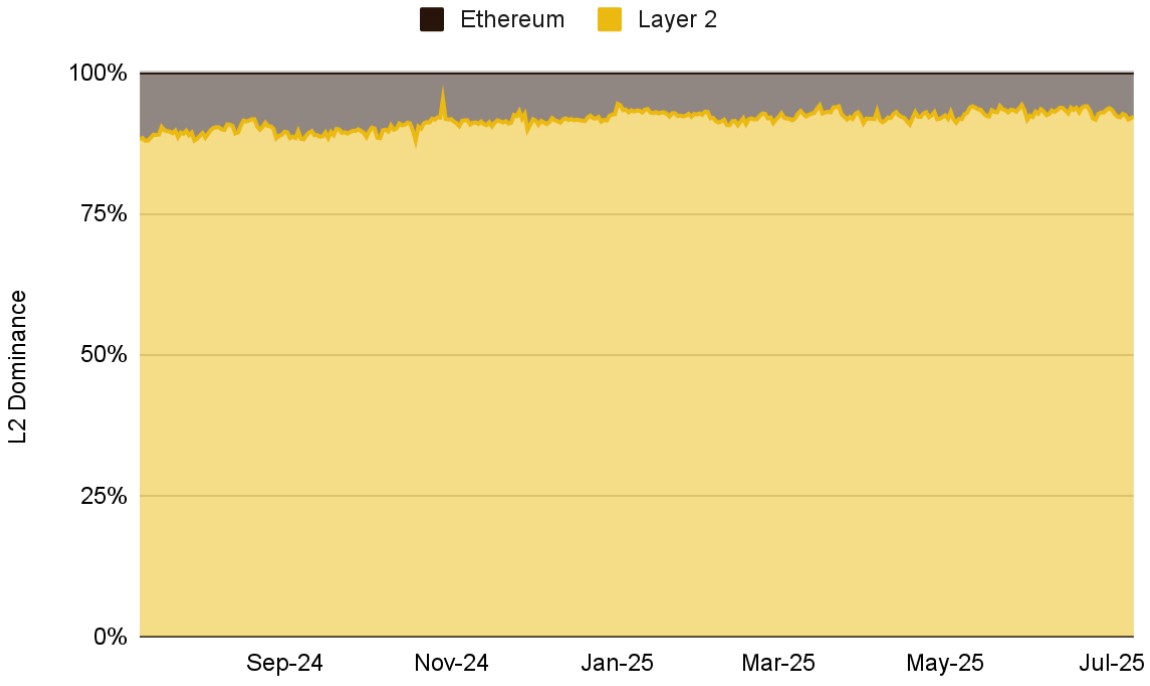
- **PeerDAS** (EIP-7594) **enables nodes to verify DA** by **downloading only a subset of blob data**, reducing bandwidth and storage requirements. This supports L2 scaling and makes it easier to run a node, improving decentralization.
- **EOF restructures EVM bytecode** with modular formatting, stricter validation, and gas optimizations. It enables versioning and safer contract deployment, making it easier to implement future EVM upgrades like account abstraction.

To read more about the Fusaka Upgrade, refer to our report, Pectra and Fusaka Upgrades: What does it mean for Ethereum?

## Layer 2

The L2 landscape remained Ethereum's primary scaling lever in H1 2025, with L2s continuing to handle a large proportion of daily execution for high-frequency transactions. While the **market's trajectory has become more nuanced than in past rollup cycles** — with diverging growth trends and maturing incentive loops — L2s remain dominant overall. Still, fee trends, user churn, modular competition, and Ethereum's own push for stronger base layer value capture have created a dynamic that leaves L2s caught between driving scale and navigating the market impacts of that shifting balance.

**Figure 33: L2s have steadily eaten into Ethereum's execution share, now accounting for over 90% of all transactions**



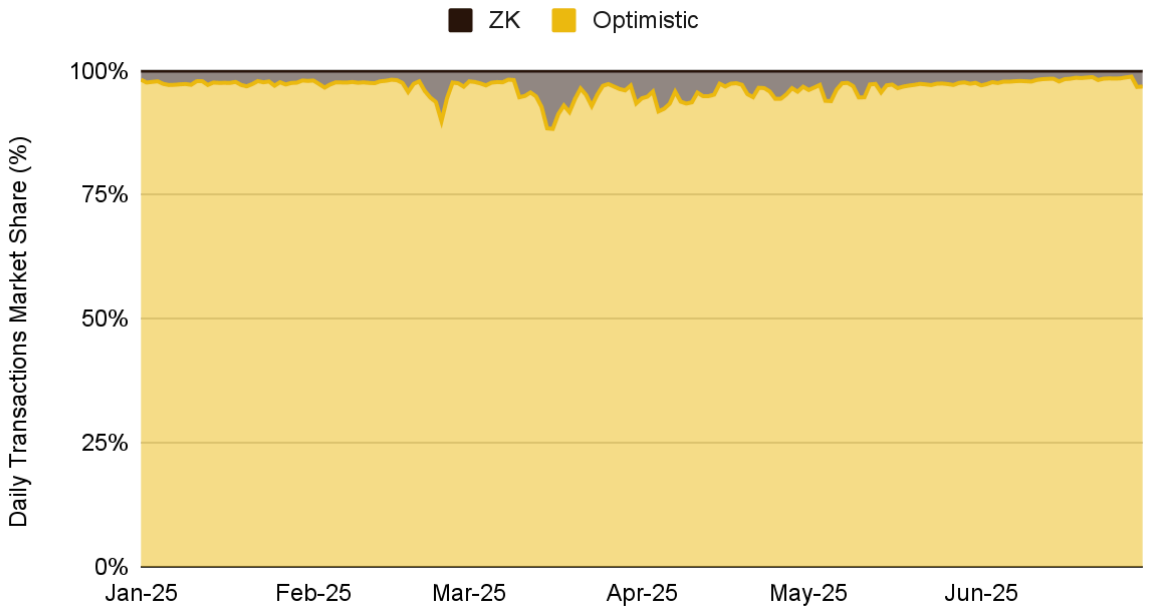

Source: Artemis, Binance Research, as of June 30, 2025

While the **scale of new L2 activity was more modest than in recent years** — perhaps signalling a gradually maturing or saturating sector — the first half still brought important shifts across the ecosystem. **Optimistic rollups remain the clear leaders in TVL and transactional activity,** seeing fewer major protocol upgrades but leaning on scale advantages and partnerships to lock in market share. Base cemented itself as a standout onboarding hub through tight Coinbase integration and an active memecoin ecosystem, putting it in direct competition with mid-tier alt-L1s for retail flows. Meanwhile, Arbitrum and OP Mainnet saw relatively flat TVL growth, with liquidity diluted across an expanding number of OP Superchain rollups and smaller app-specific L2s chasing incentive campaigns. Arbitrum's recent partnership[29] with Robinhood on tokenized equities is a strong early positioning move, but whether it draws deeper, stickier liquidity remains to be seen.

By contrast, several ZK rollups made big architectural leaps — many of them modular in nature. Starknet introduced SN Stack[30] early in the year; ZKSync progressed its elastic chain[31] architecture as part of its ZKSync 3.0 roadmap, moving from a single ZK rollup to a modular chain-of-chains model with shared liquidity and a unified prover network; and Scroll became the first ZK rollup to achieve Stage 1[32] status with its Euclid upgrade[33], which delivered lower fees, higher throughput, and improved security. Yet the cost and complexity of **ZK proving circuits continue to hinder capital efficiency**, keeping TVL and active DeFi depth below their optimistic counterparts. With traction still lagging, market pressures are becoming more visible — most notably with Polygon announcing the gradual sunset of its zkEVM L2[34], with plans for full deprecation by 2026 due to annual operational losses (~US$1M/year)[35] and a renewed focus on Polygon PoS and Agglayer.

These shifts also highlight the challenges facing a sector that is becoming increasingly modular, whether through L2 stacks themselves or external toolkits. While these pathways give developers more flexibility to combine optimistic or ZK execution with interchangeable DA layers, they also require L2s to stay nimble and adapt to evolving user needs. Persistent issues around capital inefficiency and fragmented liquidity further add to the challenging environment. This remains particularly true for ZK rollups, whose TVL still lags more mature optimistic networks despite improvements in provers and user experience. In response, many projects are doubling down on their modular stacks or focusing on narrower niches — such as payments, RWAs, or BTCFi — to attract and consolidate liquidity.

**Figure 34: Optimistic rollups now account for over 96% of daily L2 transactions**



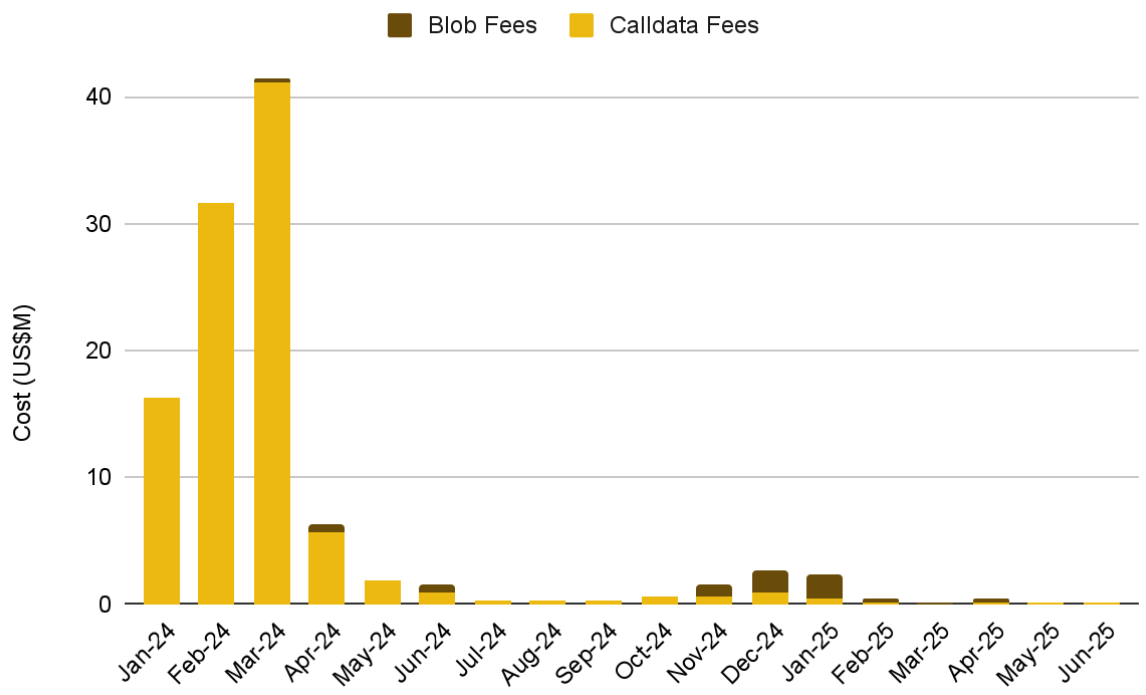

Source: Artemis, Binance Research as of June 30, 2025

Against this backdrop, Ethereum's own roadmap continues to play a critical role in helping rollups scale more efficiently. **The Pectra upgrade delivered meaningful scaling benefits for rollups**, notably by increasing blob capacity and lowering data posting costs. Early signs show L2s like Arbitrum, OP Mainnet, and Base are posting data more frequently, boosting security and UX, but rising usage (as seen in figure 33 earlier) suggests even this may not be enough long-term. Many now project that Ethereum may eventually need to support double-digit blobs per block to keep L2 fees sustainably low if growth continues.

At the same time, the so-called L2 '**blob fee arms race**' has emerged as a central narrative: the more rollups optimize blob usage — or switch to more efficient alt-DA layers like Celestia and EigenDA — the less direct revenue flows back to Ethereum's base layer. This has reignited debate around whether ever-cheaper L2 fees could impact value capture for ETH's base layer, creating a strategic tension that will likely shape protocol decisions heading into future roadmap upgrades.

These dynamics, alongside the growth of modular solutions, have also contributed to a more fragmented L2 landscape overall. As liquidity and users spread across an expanding range of rollups and appchains, modular frameworks like the OP Stack have become a double-edged sword: Unichain, Worldchain, Soneium, and others now spin up consumer chains quickly, but this proliferation cannibalises shared liquidity and dilutes user stickiness. According to L2Beat[36], there are now over 100 L2s — spanning rollups, optimiums, validiums, and other categories — at various stages of development, all competing for the same flows.

**Figure 35: Ethereum's total DA fees fell to just US$132.8K in June, compared to US$1.6M in the same month last year**




Source: Dune Analytics (@niftytable), Binance Research, as of June 30, 2025

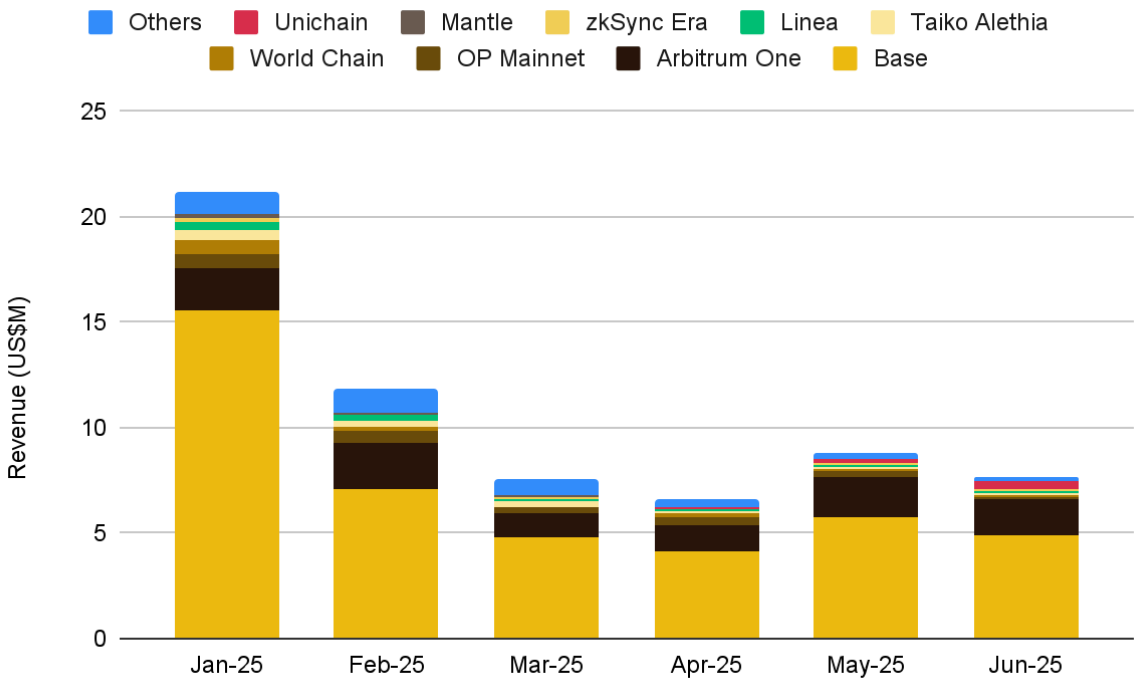
That said, some major L2s have started to show signs of network economics maturing — moving beyond just scaling transactions to sustaining meaningful fee generation and cash flows. **Base and Arbitrum stood out in H1 2025 for leading net 'profitability'** (fees earned minus Ethereum DA costs) and dominating value transfer: together they accounted for around 90% of L2 on-chain value. Base in particular captured over 80% of L2 transaction fee revenue early this year — driven by its sticky retail and institutional flows and its choice to charge standard fees without aggressive subsidies.

Optimism's OP Stack ecosystem, meanwhile, progressed on both revenue and interoperability fronts. The launch of Uniswap's dedicated 'Unichain' showed how major protocols can deploy their own L2s to optimize for specific UX needs — and unlock new revenue streams. Uniswap Labs earmarked ~20%[37] of Unichain's fee revenue for its treasury, while other OP chains like Worldcoin's World Chain added to the Superchain's footprint. In parallel, the OP Stack community tested native interoperability frameworks[38] — enabling OP chains to read each other's state and pass assets without third-party bridges — aiming to mitigate fragmentation.

Additionally, novel economic models from the '**L2 summer**' in prior years have yielded mixed results. Projects like Blast and Manta experimented with aggressive native yield and gas rebates to bootstrap usage, but often struggled to retain sticky liquidity once rewards tapered off. This highlights the bigger lesson: **L2s with genuine product–market fit can better experiment** with innovative fee sharing or validator incentives — but **incentives alone rarely sustain usage** in a crowded market. Taken together, H1 2025 underscored that rollups able to generate sustainable fee revenue and align incentives for developers, operators, and the base layer are better positioned to compete as Ethereum's

value capture debate intensifies. Still, meaningful progress on decentralization and credible trust assumptions remains uneven.

**Figure 36: Transaction fee revenue in H1 2025 remained concentrated among a few dominant L2s, reflecting where real usage and sustainable fees persisted**




Source: growthepie, Binance Research, as of June 30, 2025

**Sequencer decentralization remains largely a work-in-progress**. Most major rollups still rely on centralized sequencers, with only partial plans for permissionless models. Early based rollups like Taiko tested architectures that push sequencing and MEV capture back to Ethereum L1 to align fee flows, but these setups aren't yet dominant. In response to community and research pressure, Linea, Scroll, and Starknet announced or accelerated decentralized sequencer pilots in H1, with Scroll reaching Stage 1 classification. Vitalik Buterin and the Ethereum Foundation have also amplified the **accountability push**: multiple blog posts this year by the Ethereum founder called for stronger fraud and validity proofs, universal rollup light-client standards, and clear Stage 2 maturity goals.

Yet the market's reaction suggests that this maturity is far from guaranteed. Valuations for many L2s have fallen back to near pre-launch levels — partly due to broader market volatility and persistent doubts about low float/high FDV token models. More critically, however, it reflects uncertainty over whether these networks can deliver genuine trust-minimized security and meaningful utility at scale. The uneven progress toward fully decentralized sequencers and credible proofs continues to fuel this debate, raising questions about how many networks will realistically reach the esteemed Stage 2 benchmark and where L2's ultimately fit into Ethereum's evolving rollup strategy.

**Figure 37: Major Ethereum L2s by Type, Sequencer Status, TVS, FDV, Token Float, Fees, Active Users**

| Logo | Name | Type | Status | TVS (US$) | FDV (US$) | Float | Fees (US$M) | DAU (K) |
|---|---|---|---|---|---|---|---|---|
| | Arbitrum One | Optimistic | Stage 1 | 15.8B | 4.26B | 50% | 10.5 | 336.1 |
| | Base | Optimistic | Stage 1 | 13.5B | - | - | 40.2 | 1,500 |
| | OP Mainnet | Optimistic | Stage 1 | 3.32B | 2.93B | 41% | 8.3 | 110.4 |
| | Unichain | Optimistic | Stage 1 | 1.30B | 8.81B | 63% | 0.7 | 21.1 |
| | Mantle | Optimistic | Pre-Stage 0 | 1.55B | 4.34B | 54% | 0.7 | 7.2 |
| | ZKsync Era | ZK | Stage 0 | 1.09B | 1.21B | 52% | 0.4 | 7.5 |
| | Starknet | ZK | Stage 1 | 497M | 1.43B | 36% | 0.2 | 22.8 |
| | Linea | ZK | Stage 0 | 404M | - | - | 1.1 | 24.2 |
| | Katana | ZK | Stage 0 | 352M | - | - | - | 0.4 |
| | Blast | Optimistic | Pre-Stage 0 | 331M | 255M | 42% | 0.3 | 3.5 |
| | Manta | Optimistic | Pre-Stage 0 | 279M | 239M | 42% | 0.1 | 6.1 |
| | Scroll | ZK | Stage 1 | 243M | 364M | 19% | 0.3 | 3.2 |
| | Taiko Alethia | Based | Pre-Stage 0 | 159M | 470M | 16% | 1.4 | 153.5 |

*The table is not intended to be a comprehensive list of all L2s
Source: L2Beat, Coinmarketcap, Token Terminal, Artemis, Growthepie, Dune Analytics (@spaceharpoon), Binance Research, as of June 30, 2025

Looking ahead to H2 2025, the L2 sector faces a clear test: can rollups keep scaling user activity and liquidity in an increasingly crowded modular landscape? Ethereum's broader challenge of **balancing L2 growth with meaningful value capture** at the base layer could constrain some of the '**free power**' scaling that rollups enjoyed in earlier phases. The open debate around how much value flows back to Ethereum's base layer will continue to shape rollup strategies and design trade-offs, but this is ultimately a challenge for Ethereum to resolve at the protocol level.

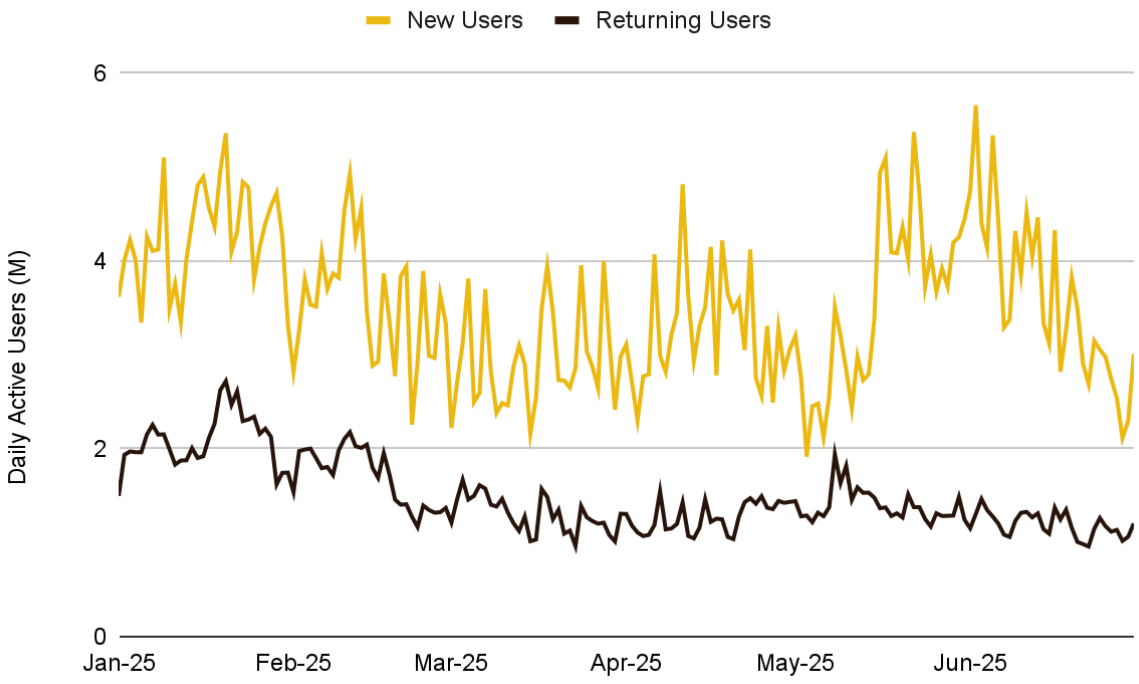
While the upcoming Fusaka and PeerDAS upgrades will expand blob capacity even further, they won't address fragmentation or capital retention challenges on their own. Unless better-aligned fee structures, real progression to Stage 1, wider adoption of based rollup architectures, or stronger cross-L2 liquidity standards gain traction, the tension between scaling and Ethereum's long-term value capture may continue to weigh on the broader L2 narrative. For rollups, the focus now shifts to proving they can **retain users without overrelying on incentives**, deepen capital stickiness, and differentiate through better UX and sequencing — all while competing for a share of an increasingly fragmented market.

# 5.2 Solana

Solana's first half of 2025 unfolded in clear phases. It began with the network riding strong momentum from its breakout year in 2024, reaching new all-time highs in market cap in January. While the broader crypto market cooled through Q1 and Q2, Solana still outperformed most other alt-L1s, **sustaining robust on-chain activity** that reflected **both speculative and increasingly durable real demand**. A key question coming into 2025 was whether the memecoin-fueled surge of 2024 would fade — so far, the network has demonstrated that it can sustain high throughput and active usage, even as that narrative resets.

While daily user growth showed a slight downward trend in H1 2025, overall engagement remained strong — averaging over 3.5M users, with more than 1.5M returning each day. In June alone, Solana processed an average of 99M transactions daily[39], totaling nearly 3B for the month — by far the highest among major L1s. For context, Ethereum generally registers about 1-1.5M daily transactions over the same period.

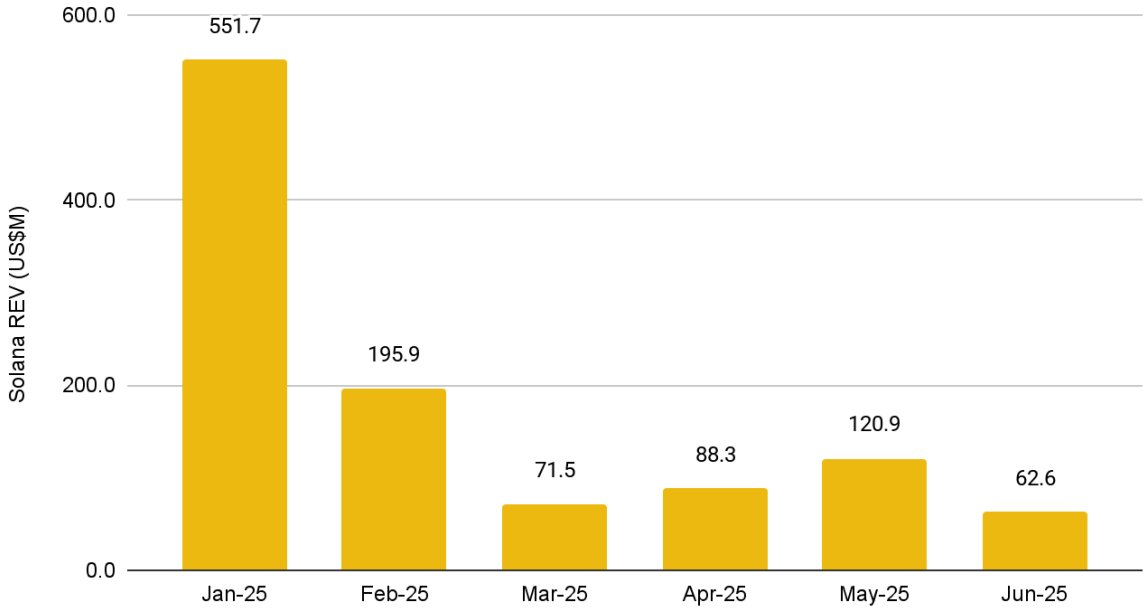
**Figure 38: While Solana's daily active users saw a slight downward trend in H1 2025, its core returning users stayed relatively stable despite cooling meme coin activity and macro volatility**




Source: Artemis, Binance Research, as of June 30, 2025

While active addresses remained stable and transactions continued to grow, Solana's on-chain fees have dropped from around US$8M per day to about US$1M per day. Although this still surpasses other major L1s like Ethereum and BNB Chain, the trend suggests a notable shift in fee generation. This divergence indicates that **higher transaction volumes are not translating into higher fee income**, implying that much of the recent activity may be lower-value or less fee-intensive. Indeed, Solana's real economic value (REV) — its total income from transaction fees and MEV — reached an all-time high in January but fell sharply by June. Though it could also be likely that January was simply an outlier driven by short-term factors.

**Figure 39: Solana's monthly real economic value has declined sharply since the start of 2025, falling from over US$550M in January to just below US$63M in June**




Source: Blockworks Research, Binance Research, as of June 30, 2025

## Sustained DeFi Activity

Solana's DeFi sector continued to mature, with TVL holding relatively steady at around US$8.6B by June[40]. **Weekly DEX volumes reached new cycle highs**, averaging over US$30B — exceeding Ethereum's during the same period. At peak, daily DEX throughput spiked to an estimated US$39B, while total bridged inflows approached nearly US$4B YTD, highlighting the scale of fresh capital entering the ecosystem to support high liquidity and trading activity.

While part of this activity was driven by an early-year memecoin frenzy — with launchpads like Pump.fun attracting waves of new creators and speculators — much of it has persisted beyond that. Major aggregators like Jupiter, AMMs like Raydium, and perp venues like Drift all benefited from strong retail trader interest as well as high-frequency bots and arbitrageurs, who have contributed to record wallet swaps, increased MEV opportunities, and consistent daily fees. Even as the memecoin hype cooled into Q2, Solana has maintained high baseline liquidity and usage, partly because the underlying DeFi tooling and trader user base remain sticky.

## Consumer Apps and Real-World Use

**Solana's growing usage in real-world applications and consumer-facing services** further underpins its sticky user base. This reflects a maturing L1 with broader use cases than past hype cycles.

- **Decentralized Physical Infrastructure (DePIN)**: DePIN remains a clear differentiator. Solana now hosts a growing cluster of projects (wireless coverage, mapping, compute, etc.), where high throughput and predictable fees support high-frequency, real-world data flows.

Helium Mobile expanded its footprint to around 98,107 hotspots deployed globally[41]. By June 30, Helium counted around 980,695 daily network users and over 300,000 mobile subscribers. Hivemapper has mapped over 563M road kilometers[42] — approximately 34% of global roads. Other early-stage DePIN projects like Grass, WeatherXM, XNET, and GEODNET all showed healthy growth. The key trend: these networks are transitioning from pure token incentives to real cash flows, with users paying for bandwidth, AI compute, or geolocation data while receiving token rewards for hardware contributions.

- **Wallet and Mobile**: Wallets and Mobile saw continued traction too. Phantom now reports over 15M monthly active users[43] and manages more than US$25B in self-custodied assets. Meanwhile, both Solflare and Backpack remain the other top downloaded and widely used Solana wallets, often ranked just behind Phantom in usage. On the mobile front, Solana Seeker[44] (successor to Saga) surpassed 150,000 pre-orders and is scheduled to begin global shipping on August 4, 2025. This growth is feeding into new user sign-ups and wallet connections on-chain.

- **Payments**: Stablecoins have become an even bigger part of Solana's growth story. Solana's stablecoin supply roughly doubled in H1 2025 — from about US$5.2B in January to US$10.9B by June end. USDC alone now exceeds 70% of stablecoin supply on Solana, positioning it firmly as the largest non-Ethereum stablecoin rail.

  Additionally, token extensions, which add programmable features and compliance options for SPL tokens, have helped cement Solana's appeal for more sophisticated stablecoin issuers. Together with payment tools like Solana Pay, the network is being positioned for real-world commerce and low-cost cross-border transactions.

  Major retail and institutional integrations underscore this growth: Polymarket[45] and Kalshi[46] both enabled Solana-USDC deposits for prediction and derivatives markets, while Societe Generale's[47] crypto arm launched its USD CoinVertible stablecoin on Solana (and Ethereum) in mid-2025 with BNY Mellon acting as custodian. These signals reflect Solana's traction as an efficient settlement layer for stablecoin payments.

**Figure 40: Solana's stablecoin market cap has grown significantly in 2025, surpassing other major chains to become the third largest, overtaking BNB Chain**

| | Name | Stablecoins Market Cap (US$B) |
|---|---|---|
| | **Ethereum** | 126.4 |
| | **Tron** | 81.3 |
| | **Solana** | 10.9 |
| | **BNB Chain** | 10.5 |
| | **Base** | 4.2 |

Source: DefiLlama, Binance Research, as of June 30, 2025

## TradFi Embrace and Institutional Momentum

Perhaps the biggest institutional narrative for Solana this year has been the strong **progress toward a spot Solana ETF** in the United States. Multiple asset managers — including BlackRock, VanEck, Fidelity, among others — filed for Solana ETFs in H1 2025. By June, the SEC had asked Solana ETF issuers to update filings with details on in-kind redemptions and staking structures, signaling real regulatory traction. Bloomberg ETF analysts[48] have indicated a high likelihood of approval for a Solana spot ETF by mid-2025, with the SEC's requests implying that staking yields (~7% APR) could flow through to ETF investors — a unique feature among existing crypto ETFs.

Meanwhile, Solana also gained mindshare as a crypto treasury asset for listed companies. Nasdaq-listed DeFi Development Corp. announced a US$5B[49] line to accumulate more SOL, while Upexi[50] (UPXI), another Nasdaq firm, revealed plans for a dual Solana strategy: it now holds ~735,000 SOL in treasury (~US$105M) and is staking a portion for yield, while also moving to tokenize its common stock on Solana using the Superstate/Opening Bell platform. This gives Upexi's shareholders the option to hold and trade SEC-registered shares as Solana tokens, with 24/7 instant settlement — a milestone for real-world asset (RWA) tokenization on the network. Moves like these point to Solana's growing legitimacy as a backbone for both institutional staking and new equity rails.

## Network Resilience and Firedancer Readiness

Solana's core network demonstrated real resilience under stress in H1. The January surge in memecoin bots tested the chain with 200M+ daily transactions, yet uptime remained ~100% for over 16 months straight, according to the June 2025 Network Health Report. To keep pace, the ecosystem rolled out critical performance improvements: the Jito/Agave scheduler upgrade boosted throughput efficiency for prioritized transactions by around 80%, stake-weighted QoS helped filter spam, and protocol-level tweaks — including the

QUIC protocol, gossip bandwidth optimizations, and stale vote de-duplication — all reduced validator load.

**Firedancer[51] has become a key pillar in Solana's long-term scaling roadmap**. The Frankendancer testnet progressed through H1, with about 34 validators (roughly 7% of staked SOL) testing the C++ client. Firedancer's independence from the original Solana Labs client means the network will gain true client diversity. By introducing a second independent client, Firedancer is able to increase network security and resiliency, i.e., if a bug takes down the other clients, the network can remain running on Firedancer. In internal tests, Firedancer has shown throughput above 1M TPS and full mainnet block replay. Its mainnet launch, still targeted for late 2025, remains one of the most anticipated milestones for Solana's scale narrative.

In parallel, additional independent clients like Mithril and Sig are in active development — expanding the network's technical diversity further. Combined with Solana's competitive validator economics — high block rewards, 100% of priority fees going to validators, and staking yields near 7% — plus 1,295 active validators across more than 40 countries, the network continues to maintain an industry-leading Nakamoto coefficient, reinforcing decentralization and liveness guarantees.

On the developer side, tooling also advanced in H1. The new Solana Attestation Service (SAS) now lets developers link off-chain identity data (like KYC or accreditation) directly to on-chain accounts, enabling more compliant launches and on-chain credit use cases. Together, these infrastructure and client improvements — driven in part by lessons learned from Q1's congestion — highlight how the Solana Foundation has pivoted more resources toward scaling, performance, and real-world usability. This continued focus on resilience and independent client diversity is a key reason why Solana's developer ecosystem remains among the strongest today.

# 5.3 BNB Chain

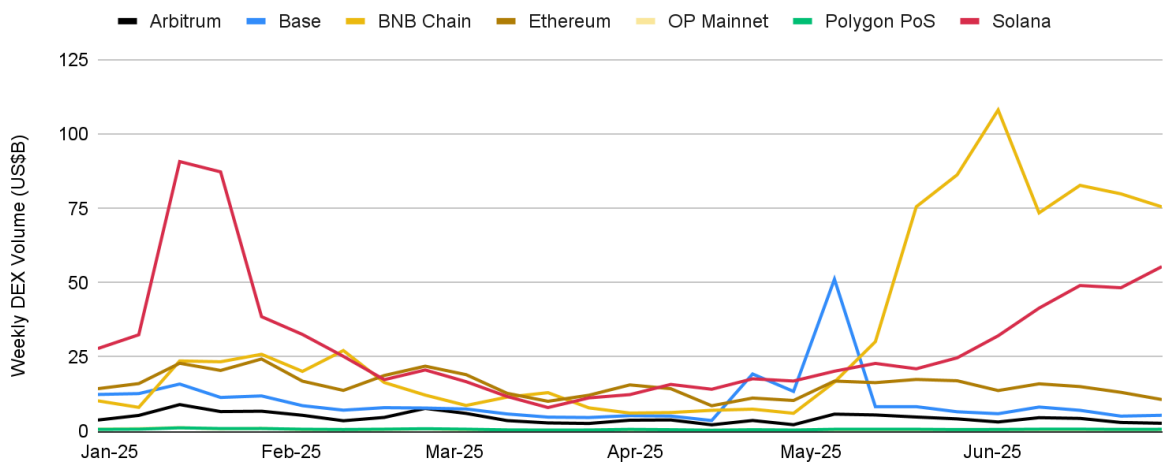
BNB Chain's first half of 2025 stood out for **strong on-chain activity even as the broader crypto market corrected**. Growth was driven by **robust developer interest[52]** (strong participation in hackathons, incubators, grants, and US$100M+ ecosystem funds and high user engagement. The network saw a 241.8% surge in weekly transaction volumes[53] (~94M transactions by June end) and onboarded around 419.3K new daily users, with network revenues coming to around ~US$12M for the year. Daily transactions reached 16.6M and daily active addresses 4.4M, outpacing most other L1s in this period. These growing metrics came even as BNB's market cap dipped (ending H1 at US$91.9 B, still 4th-largest crypto asset by value).

Importantly, usage growth wasn't just headline spikes: simple wallet-to-wallet transfers — basic BEP-20 token transfers — rose from 8.1M to 37.1M (+358%), becoming a large source of fees in H1. This shift highlights how BNB Chain's user base is evolving toward more everyday transactional activity, not just speculative trades.

## Breakthrough DeFi

**BNB Chain led all L1s in DEX trading volume** for most of 2025. By the end of June, it recorded approximately US$369.2B in 30-day DEX trades, with a peak weekly volume of over US$108B, outpacing Ethereum, Solana, and other major chains. While BNB Chain's DEX volumes saw growth for most of the year, the biggest surge came after May, driven largely by PancakeSwap[54], which handled over 90% of that volume and broke its own successive highs at the same time. This spike in trading activity also fueled broader DeFi growth: BNB Chain's total TVL sustained some of the liquidity inflows and surpassed US$6B, up from around US$4.5B during the same period in 2024.

**Figure 41: BNB Chain DEX volumes hit new highs, now leading all other chains with a peak weekly volume of over US$108B**




Source: Artemis, Binance Research, as of June 30, 2025

While the top 5 protocols still make up ~95% of BNB Chain TVL[55], a more diverse mix of DeFi primitives is emerging across swapping, lending, liquid staking and new tokenization sectors. This is part of a strategic push to deepen liquidity beyond just a handful of mega-pools. In fact, weekly on-chain fees and stablecoin supply reached multi-year highs, in part thanks to new campaigns (see below).

## Ecosystem Incentive Push

BNB Chain's Gas-Free Carnival, launched late 2024, was extended through mid-2025[56] and expanded to USDT, USDC, FDUSD, and the Trump family's USD1 stablecoin. This initiative eliminated gas fees for transferring and withdrawing stablecoins.. The results speak for themselves: stablecoin liquidity surged to over US$10B by June, and BNB Chain ranked among the **top chains in stablecoin transfer volume** in May–June. The campaign[57] alone generated ~US$4.8B of gasless stablecoin volume and ~63K new wallets in its first 30 days — a clear sign that the program meaningfully reduced cost friction for new users.

On the builder side, the Martians Program[58] was relaunched with tiered "Learn, Lead and Launch" tracks. Coupled with Hackvolution[59] events and the MVB accelerator, these programs nurtured new developers across AI, DeFi, gaming, and infrastructure — ensuring BNB Chain stays competitive in developer mindshare. To support these

initiatives, funding and incentives were plentiful: over US$540K[60] in hackathon prizes (plus a US$100M liquidity program and zero-gas campaigns) drove builders, and security innovations.

Overall, user incentives (gasless transfer, stablecoins) and project grants (liquidity pools, hackathon prizes) combined to rapidly expand engagement on the network.

## Broadening Narrative: Memecoins, RWAs, AI

BNB Chain broadened its narrative and use-case mix in H1 2025, as part of a **multi-pronged ecosystem growth strategy**. By proactively chasing wider industry narratives like memecoins, real-world assets (RWAs) and AI, BNB Chain has been able to capture both user and developer mindshare.

- **Memecoins**: H1 2025 was the first time that BNB Chain seriously broke through in the memecoin narrative. In early 2025 BNB Chain briefly overtook Solana and Ethereum in memecoin trading volume. In June alone, it held ~45% of all memecoin DEX volume[61] (vs. 25% on Solana, 20% on Ethereum). Launchpads like Four.Meme, aggressive liquidity tools, and PancakeSwap's DEX integrations helped support this growth. A viral memecoin "TST"[62] in February pushed daily active addresses to an all-time high, with retail users flocking to BNB Chain as an accessible alternative to more congested chains.

- **Real-World Assets**: In late May, BNB Chain launched a dedicated RWA Accelerator Initiative[63], aligning with the on-chain RWA market hitting record highs (~US$24B globally by mid-year). The program offers funding, technical support, and liquidity bootstrapping for tokenized RWAs — from securities to commodities to invoices. BNB Chain aims to position itself as an RWA-friendly chain leveraging its low fees, high throughput, and improved BEP-20 tools, as developers explore on-chain bonds, invoice financing, and other primitives.

- **AI and Data Economy**: "AI-first" became more than a buzzword for BNB Chain in H1. The BNB AI Hack (an AI+Web3 hackathon) drew hundreds of submissions, awarding top projects (e.g., agent toolkits, AI game engines) and underscored the community's focus on AI-powered dApps. Over 60 AI-focused projects[64] (data marketplaces, AI agents, gaming, social, DeFi) now run on BNB Chain, with BNB Greenfield driving the surge: its decentralized storage usage spiked ~527.8% as AI/data apps tap cheap on-chain storage.

  Notable use cases include DataDAOs[65] that monetize ML datasets via Greenfield, and early pilots using Trusted Execution Environments for secure AI model training. Even the developer stack is pivoting here: tools like "Code Copilot" aim to help smart contract devs integrate AI workflows. BNB Chain also introduced infrastructure such as the Model Context Protocol (MCP), effectively enabling persistent memory and context-sharing for AI agents on-chain.

## Security and MEV Mitigation

BNB Chain took notable steps to **improve on-chain security** and fairness in H1, with the aim of protecting traders and preserving network integrity as usage rises. In the first

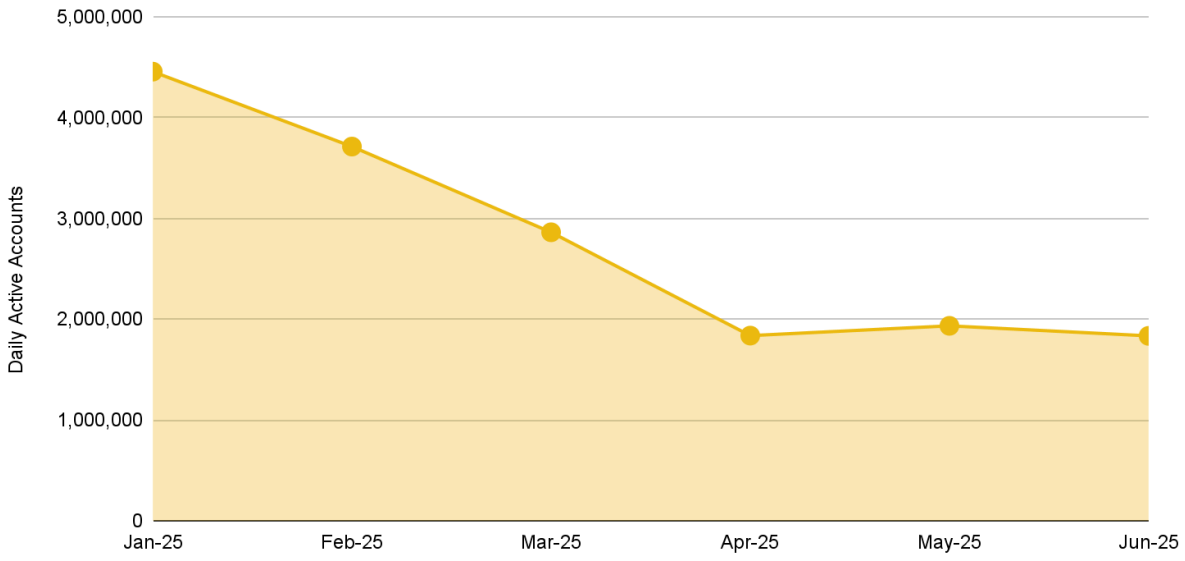
quarter it convened the '**BNB Good Will Alliance**'[66] – a coalition of validators and infrastructure providers aiming to curb malicious MEV practices on the network. Governance mandates now instruct validators to enhance block-vote coordination and limit mempool exposure to eliminate malicious MEV. The alliance's first initiative deployed sandwich-attack filters via certain block builders (e.g. BlockRazor, 48 Club), which reduced sandwich frontrunning on BNB Chain by 95%[67]. This is significant because the new opt-in system prevents validators from including known toxic transactions.

In parallel, BNB Chain's developer model continues to spin out from a single-entity structure toward a more community-driven approach. Although the validator count remains capped at ~45[68], there's a renewed emphasis on **expanding decentralization** and **governance transparency** — addressing one of BNB's long-standing criticisms.

## Network Scaling: opBNB

opBNB[69], BNB Chain's optimistic rollup built on the OP Stack, posted a mixed H1 2025 performance: while daily active users dipped, it still maintained an average of ~2.6M DAU, with daily transaction counts generally ranging between 2–4M. Leading applications on opBNB include GameFi projects such as World of Dypians, infrastructure platforms like Alaya AI, and DeFi protocols including Dypius (Bridge), KiloEx (perps), and PancakeSwap (DEX). opBNB aims for 10,000 TPS and a 10x fee cut[70(, with new wallet integrations and a dedicated gas token in the pipeline. This will help BNB Chain scale toward its target of 100M daily transactions while keeping user costs near-zero.

**Figure 42: opBNB's daily active accounts have declined steadily this year but still average approximately ~2.6M**




Source: opbnbscan.com, Binance Research, as of June 30, 2025

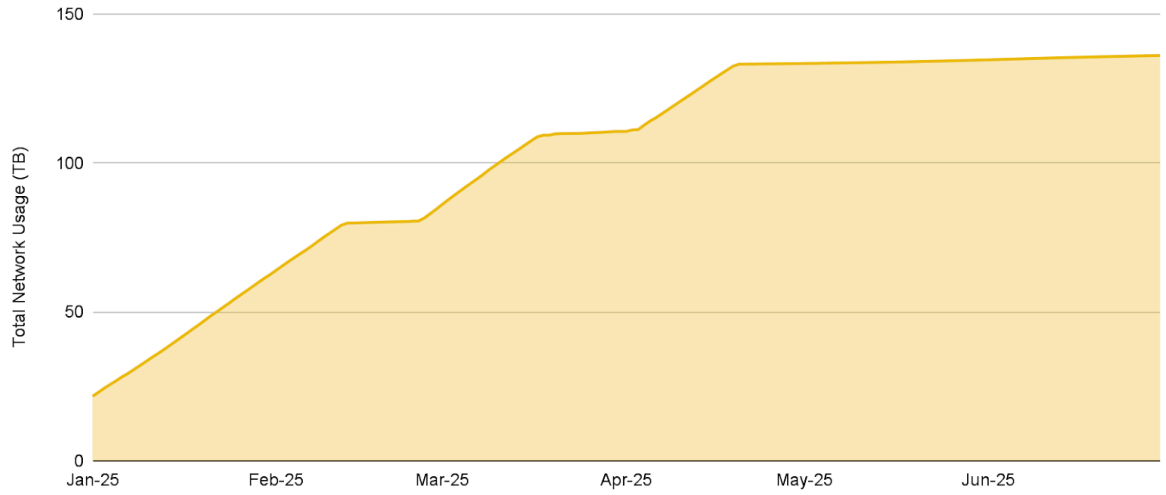
## Data Layer: BNB Greenfield

BNB Greenfield[71], the chain's decentralized data layer, recorded strong growth in H1 2025. By mid-year, Greenfield hosted approximately 124 TB of stored content, recorded nearly 30M transactions, and supported over 110,000 unique addresses, according to the

GreenfieldScan explorer. These figures represent significant growth from late-2024 levels and reflect increasing adoption among AI, cloud, and data-economy applications.

In particular, **AI and data-economy projects have been key drivers**, with seamless bridging to BNB Chain enabling immediate use of Greenfield data by on-chain applications. As such, projects have been able to benefit from several new use cases (cloud hosting, Web3 applications storing large datasets, DataDAOs monetizing data, among others). Together, these trends position Greenfield as a complementary data layer for AI, RWA, and tokenization projects.

**Figure 43: BNB Greenfield's network usage has grown by approximately 528% since the start of the year**




Source: greenfieldscan.com, Binance Research, as of June 30, 2025

## Key Upgrades: Pascal, Lorentz, and Maxwell

BNB Chain delivered several major protocol upgrades in H1, largely focused on boosting speed and scalability.

- **Pascal**: In Q1, the Pascal hard fork activated Ethereum-style smart wallets, BLS12-381 cryptography for more advanced SNARKs and signatures, gas-abstraction and transaction batching for better EVM compatibility. This puts BNB Chain on par with Ethereum's Pectra upgrade — but with its "high-throughput, low-latency EVM" advantage intact.

- **Lorentz**: In Q2, focus shifted to performance: the Lorentz upgrade was rolled out in April 2025 on both BNB Chain and opBNB. Lorentz focused on raw performance: BNB Chain's block times were cut from ~3 seconds to 1.5 seconds, while opBNB dropped to 0.5 seconds, speeding up confirmations. Faster finality, higher TPS capacity, and the roadmap toward sub-second confirmation have helped propel BNB Chain's value proposition: any Ethereum-compatible dApp can port over easily — but run faster and cheaper.

- **Maxwell**: The highlight at the end of H1 was the Maxwell upgrade (June 30, 2025), which halved BNB Chain's block time again — now down to roughly 0.8 seconds.

Maxwell implemented BEP-524, 563, and 564 to enable sub-second block intervals and improve validator synchronization. With this upgrade, BNB Chain became one of the fastest major L1s, achieving boosted throughput and sub-second finality. After Maxwell went live, the network handled around 16.6M transactions per day with 4.4M daily users, while transaction fees stayed low at just a few cents.

Going forward[72], BNB Chain's focus is on scaling its sub-second finality to handle higher throughput targets of 100M+ transactions per day, while keeping latency ultra-low and fees minimal. A major priority is expanding Megafuel to enable universal gasless transactions, letting users pay fees in stablecoins or any BEP-20 token with sponsored gas. Further smart wallet upgrades will build on the existing EIP-7702 support by adding more advanced paymaster models and multi-step transaction features to simplify the user experience. Validators are also expected to adopt new propagation and communication protocols to strengthen MEV resistance.

On the AI front, the roadmap emphasizes launching decentralized DataDAOs, autonomous on-chain AI agents, and secure model storage to support emerging AI-powered dApps. Alongside these core upgrades, BNB Chain will continue to foster memecoin launches, real-world asset support, and broader community-driven programs that help drive user activity and sustained network growth.

# 5.4 Others

## Avalanche

Avalanche continued to distinguish itself through its subnet architecture and enterprise focus in H1 2025. The Avalanche ecosystem saw growth in subnet deployments[73] and record C-Chain transaction volumes, positioning itself as a leading platform for scalable, application-specific networks. A standout example was FIFA's[74] decision to launch a dedicated "FIFA Blockchain" as an Avalanche subnet – a custom L1 chain for fan engagement. This came on the heels of the Avalanche9000 upgrade, which launched in late 2024 to lower barriers for spinning up customized L1 blockchains (subnets), and the Octane upgrade in April 2025, which improved gas efficiency on the C-Chain during peak periods.

The period also saw traction in RWA tokenization and DeFi infrastructure, with Avalanche now supporting over US$190M[75] in diverse tokenized assets spanning treasuries, carbon credits, and other on-chain funds. Gaming-focused subnets expanded as well, highlighted by Pixelmon's[76] launch of its Japanese IP mobile RPG, Warden's Ascent, on Avalanche subnets. Together, these developments reinforced Avalanche's position as a popular destination for particular institutional and consumer applications.

## Sui

This year saw Sui[77] establish itself as one of the largest non-EVM blockchains by TVL. In particular, Sui's DeFi TVL has grown to roughly US$1.8B by June (vs around US$564M same time last year). This positions it second among non-EVM chains and within the top 10 overall, even ahead of longer-standing networks like Avalanche and Cardano in on-chain assets.

Strong growth in high-performance DeFi apps — including liquid staking, lending, and active DEXes — drove much of this increase. Sui's DEX ecosystem alone processed over US$50B in cumulative volume, with Bitcoin-backed assets now accounting for a notable proportion of its DeFi TVL, indicating meaningful cross-chain inflows. Stablecoin adoption was another key factor as monthly stablecoin transaction volume exceeded US$130B, and circulating supply more than doubled to US$1.1B by June end.

The network also expanded its focus beyond DeFi: new gaming partnerships[78] brought more studios on-chain in Asia, and the Foundation continued to scale its Microsoft[79] collaboration for AI-powered dev tooling and cloud integrations. Taken together, Sui's H1 growth highlights how a novel parallel execution model, paired with strong liquidity incentives, can help newer L1s scale and attract capital and developers.

## Tron

Tron continued to receive wide engagement, particularly in Asian and emerging markets, recording over 2M daily active addresses for the most part. This user activity, largely driven by Tron's role as a popular chain for USDT stablecoin transactions[80], has translated into substantial on-chain revenue – Tron generated over US$1.5B in protocol revenue this year, ranking it among the top chains by fee revenue. By June end, Tron's stablecoin ecosystem had over US$80B TVL and monthly stablecoin transaction volume over US$652.9B. All told, Tron's H1 2025 highlights show it solidifying its place as a stablecoin settlement layer and one of the most actively used L1s.

Beyond stablecoins, Tron saw steady growth[81] in new corridors for real-world payments, expanding bank and fintech integrations for local currency on/off ramps across Asia and the MENA region. Meanwhile, the BitTorrent Chain, promoted as an L2 extension of Tron, continued to build cross-chain bridges to support additional liquidity flows.

A unique corporate development added another layer to Tron's positioning: SRM Entertainment, a Nasdaq-listed IP and consumer products company, announced[82] that it had signed a definitive agreement to acquire Rainberry Inc., the legal entity behind the Tron network. The deal effectively brings Tron's blockchain treasury and ecosystem under a publicly listed company structure. According to filings, the acquisition is structured as an all-stock transaction, and once completed, Rainberry's blockchain-related assets — including its sizable treasury holdings and development operations — will sit within SRM's corporate framework. Justin Sun, who controls Rainberry, framed this as a step toward bridging blockchain assets with traditional capital markets and increasing transparency around Tron's reserves. If finalized, the transaction would mark one of the first examples of a major L1 network's treasury assets being indirectly listed through a traditional public market vehicle.

## Cardano

Cardano reached a major governance milestone this year by ushering in the Voltaire era of on-chain governance. The CIP-1694 upgrade – enacted with a new on-chain constitution in February – officially transitioned Cardano to decentralized governance. Power over protocol changes and treasury funds has shifted from founding entities to the community, via a governance structure made up of stake pool operators (SPOs), a constitutional committee, and over a thousand elected delegated representatives (DReps).

Beyond governance, Cardano's ecosystem expanded only modestly: stablecoin usage rose, with the USDT-pegged USDM growing to US$11.3M and the new USDA stablecoin surpassing a US$10.2M market cap, although overall DeFi TVL saw a drop in the same period[83]. Looking ahead, H2 2025[84] will focus on operationalizing the new governance system — including the final constitution vote and the first community treasury proposals — while incremental improvements to Hydra scaling and Mithril snapshot syncing continue. Overall, Cardano's recent progress is less about market-driven growth and more about governance innovation and laying a foundation for its self-governed future.

## The Open Network (TON)

TON made several tangible improvements across its core protocol, DeFi ecosystem, and interoperability stack, firmly positioning it as the backbone for Telegram's growing Web3 strategy. Early in the year, TON became the exclusive chain[85] for Telegram's Mini App platform and related in-app payments, making Toncoin the sole cryptocurrency for features like Stars, Premium, and Ads. This was further strengthened by TON Connect[86], now the mandatory wallet protocol for all on-chain Telegram apps. Despite this tight alignment, governance remains separate: the TON Foundation continues to operate as a Swiss non-profit, with no direct authority from Telegram itself.

While on-chain engagement[87] did decline this year — with daily active addresses dropping from around 218,600 to 161,000 — the TON ecosystem still made notable strides. Cross-chain capabilities improved significantly through a LayerZero integration[88] that made USDT and other assets moveable across chains like Ethereum and TRON, while the original Toncoin bridge was sunsetted after surpassing 100M TON transferred[89]. Plans are now underway to launch TON Teleport BTC[90], a trustless bridge that will bring native BTC liquidity to TON by minting 1:1 tgBTC. DeFi and tokenized assets saw notable growth too: Ethena's USDe stablecoin launched on TON in Q2, alongside an omni-chain version of Tether Gold and Libre's US$500M Telegram Bond Fund[91] for RWA tokenization. Supporting this, Telegram's built-in wallets expanded features such as multi-currency support and staking, and RedotPay's integration enabled spending USDT at millions of merchants globally.

As of mid-2025, top crypto VCs collectively hold more than US$400M worth of Toncoin[92] — a sign of growing institutional confidence. Looking ahead, early H2 2025 began with The Open Platform (TOP) raising a US$28.5M Series A[93], reaching a US$1B valuation — marking the TON ecosystem's first unicorn and setting the tone for further growth. TON's public roadmap for the remainder of the year highlights several key releases, including the Accelerator mainnet upgrade, a new L2 payments network, the TOLK 1.0 smart contract language, and the launch of Teleport BTC for Bitcoin interoperability. The recently announced Champion Grants program and the revamped Builders Portal will continue to fund and support high-impact projects in gaming, payments, and DeFi, while the Telegram Apps Center promotes new dApps to Telegram's large user base.

# 06 / Decentralized Finance

## 6.1 The Big Picture

**A Maturing Ecosystem Showing Resilience and Specialized Growth**

In the first half of 2025, the DeFi sector demonstrated remarkable resilience. Total Value Locked (TVL) remained robust, concluding June at approximately **US$151.5 billion**—a modest 5.8% decrease from the beginning of the year. Despite market volatility, DeFi Dominance (the sector's share of the total crypto market cap) held steady at **3.4%**. This stability signals sustained investor confidence and capital retention within the ecosystem.

User engagement surged, with monthly active addresses for decentralized protocols consistently exceeding **340 million**, a remarkable **240% YoY increase** from 100 million in June 2024. This rapid user growth, occurring even as the broader altcoin market remained cool, indicates that DeFi is maturing beyond a speculative bubble into an integral component of the wider digital asset ecosystem.

**Figure 44: Major DeFi metrics 6M/12M change**

| Metric | Jun 30 2025 | % change (6M) | % change (12M) |
|---|---|---|---|
| **DeFi TVL (US$B)** | 151.5 | +28% | +31% |
| **DeFi Dominance** | 3.4% | +3% | -9% |
| **Monthly Active Users (M)** | 340 | +28% | +240% |

Source: Dune, Binance Research, as of June 30, 2025

## Key Trends and Narratives

### 1. Platform Specialization: The Trio Reign of Ethereum/Solana/BNB Chain

The DeFi market has seen increased specialization among the 3 leading blockchains.

- **Ethereum has** solidified its role as the premier settlement layer for institutional capital and high-value assets like restaked tokens and Real-World Assets (RWAs), leveraging its security and vast capital base. It commands a dominant **58.44%** of the market with a**US$89.4 billion TVL**.

- **Solana**, in contrast, has emerged as the undisputed leader for retail activity, user engagement, and transaction volume, thanks to its high transaction speeds and low costs. It boasts **nearly 13 times the daily active addresses of Ethereum**.

- **BNB Chain**, PancakeSwap has played a pivotal role in driving decentralized exchange growth by pushing the DEX-to-CEX trading volume ratio to a historic high of 29%. It has successfully carried forward Solana's meme token craze, attracting a large user base and capital inflow. Additionally, BNB Chain has innovatively empowered more utility tokens through Alpha airdrops and trading competitions, fostering greater ecosystem diversity and user engagement.

### 2. The Rise of Real-World Assets (RWAs) in Lending

Market-driving narratives also evolved significantly. Lending protocols reached an all-time high TVL of over **US$55 billion**, driven not just by leverage on crypto-native assets, but by the explosive growth of RWAs. The RWA sector itself has surged to over **US$24.4 billion** in value. Institutional-grade private credit has become the key bridge between TradFi and DeFi, accounting for nearly 60% of issuances, followed by tokenized U.S. Treasuries and commodities.

### 3. Prediction Markets

Prediction markets made a breakthrough in H1 2025. The decentralized platform Polymarket secured an official partnership with social media giant **X**, with its June trading volume exceeding **US$1.1 billion**, monthly active users surpassing **400K**, and an average of over **3 million** monthly trades. In the U.S., Kalshi, operating under the CFTC's regulatory framework, received positive news in May 2025 when a court dismissed an appeal against it, potentially paving the way for the **legalization of political prediction markets.** A growing body of evidence suggests that prediction markets are evolving beyond pure financial speculation into decentralized tools for information and public opinion analysis, significantly broadening their applications and market potential.

**4. Maturation of 2024 Innovations**

Innovations from 2024 have matured into cornerstones of the DeFi economy.

- **Restaking**, led by EigenLayer, has established itself as a more than **US$11 billion** "Security-as-a-Service" layer providing economic security to the ecosystem.

- **Basis Trading Strategies**, exemplified by Ethena and its synthetic dollar (USDe), have created a systemically important liquidity and yield-generation hub now exceeding **US$5 billion** in scale.

**5. DEXes Gain Significant Market Share**

In spot trading, decentralized exchanges (DEXs) achieved a significant milestone. The ratio of DEX to centralized exchange (CEX) spot trading volume hit an all-time high of nearly **29%** at the end of June, signaling a structural shift in user preference towards self-custody and permissionless trading.

**6. The Regulatory Environment for DeFi**

DeFi witnessed significant regulatory improvements. Although the US lacks direct DeFi legislation, the SEC's DeFi roundtable and the Chairman's statement that DeFi is "consistent with American values," suggesting potential regulatory exemptions for DeFi companies, signals a more favorable industry outlook.

These positive regulatory signals directly catalyzed milestone institutional actions, including: established Wall Street investment bank Cantor Fitzgerald formally entering on-chain lending through partnership with DeFi protocol Maple Finance, and BlackRock's BUIDL fund integrating with Avalanche's Euler protocol via its sBUIDL version. These developments collectively illustrate an accelerating convergence between traditional and decentralized finance.

Overall, DeFi is transitioning from a "wild growth" phase driven by internal speculation to a "sustainable growth" phase powered by both external institutional capital and internal functional maturation. Early DeFi growth was primarily fueled by high-risk liquidity mining and circular leverage of crypto-native assets. Future market TVL will increasingly be anchored by sectors with stable cash flows and real-world value backing, such as Real World Assets (RWA) and institutional lending. These sectors attract not transient "tourist capital" seeking short-term high yields, but "resident capital" pursuing long-term, stable returns, establishing a solid foundation for DeFi market resilience and sustainable development.

The primary constraint on current DeFi growth is no longer technical scalability, but rather the ability to provide trustworthy, compliant, and efficient channels to accommodate massive capital flows from traditional financial markets.

# 6.2 Sub-Sector Spotlight

In the first half of 2025, DeFi's various sub-sectors experienced different rates of growth and evolution. From traditional lending and trading to emerging areas like restaking and real-world assets, each field has shown unique dynamics and market landscapes. The following is an overview of key metrics for core sectors as of the end of June.

**Figure 45: Every major DeFi sub-sector recorded a notable influx of capital in 2025**

| Sub-Sector | Liquidity | | Diversity | |
|---|---|---|---|---|
| | TVL (US$B) | YTD (%) | Project Count | Top Project Dominance (%) |
| Liquid Staking | 46.6 | -18 | 204 | 95.1 Lido |
| Lending | 53.1 | 13 | 470 | 6.3 Aave |
| Bridge | 46.1 | 20 | 108 | 29.7 WBTC |
| Restaking | 18.8 | -19 | 15 | 60.5 EigenLayer |
| Decentralized Exchange (DEX) | 19.1 | -13 | 1,533 | 24.8 Uniswap |
| Liquid Restaking | 9.5 | -26 | 28 | 63.2 Ether.fi |
| Yield | 8.7 | 1 | 535 | 49.4 Pendle |
| Collateralized Debt Position (CDP) | 9.1 | -12 | 170 | 58.1 MakerDAO |
| Real-World Asset (RWA) | 12.8 | 200 | 196 | 14.6 Securitize |
| Basis Trading | 8.1 | 8 | 18 | 77.6 Ethena |
| Derivatives | 5.3 | 3 | 297 | TVL: 7.2; Volume: 60 Hyperliquid |
| Prediction Market | 0.15 | -3 | 79 | 80 Polymarket |

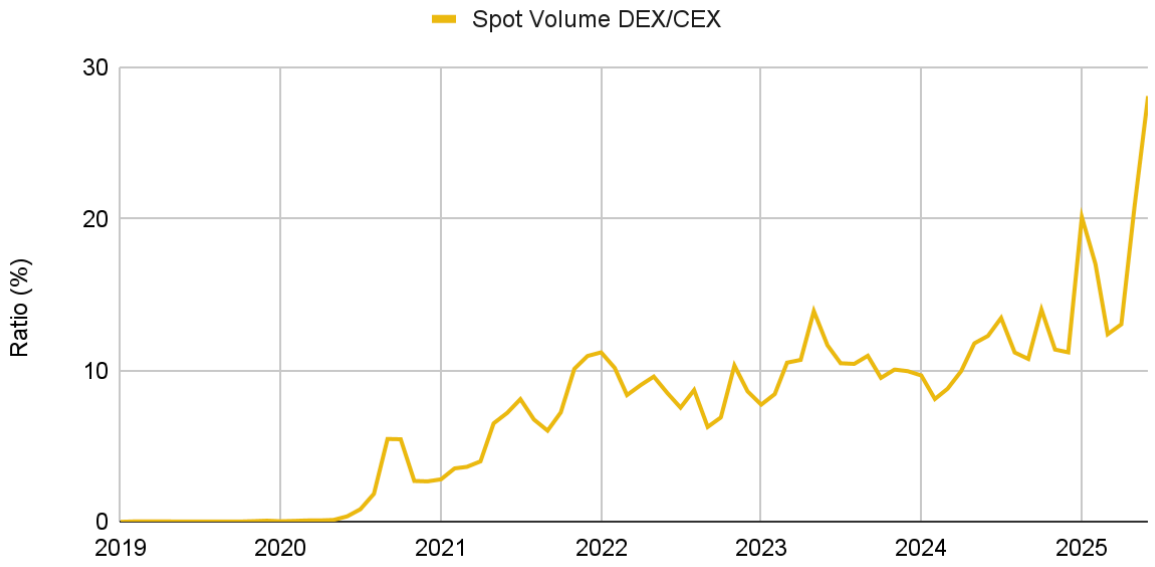
Please note: The above table does not comprise an exhaustive list of DeFi sub-sectors. Where TVL is hard to measure or highly dispersed, the top project's market share is used instead
Source: DefiLlama, RWA.xyz, Binance Research, as of June 30, 2025

## Decentralized Exchange: Record Volumes and Market Shifts

In H1 2025, the most compelling story in the DEX space was its historic market share gain in spot trading and the dramatic shifts in leadership within the market.

The most significant macro trend is the substitution effect of DEXs for CEXs. As of June 30, the ratio of DEX to CEX spot trading volume reached **an all-time high of 29%.** This is a significant increase from the **11%** level at the beginning of the year, providing strong evidence that users are **migrating from centralized platforms to decentralized**, **self-custodial trading environments** at an unprecedented rate.

**Figure 46: DEX market share jumped to ATHs in June 2025**

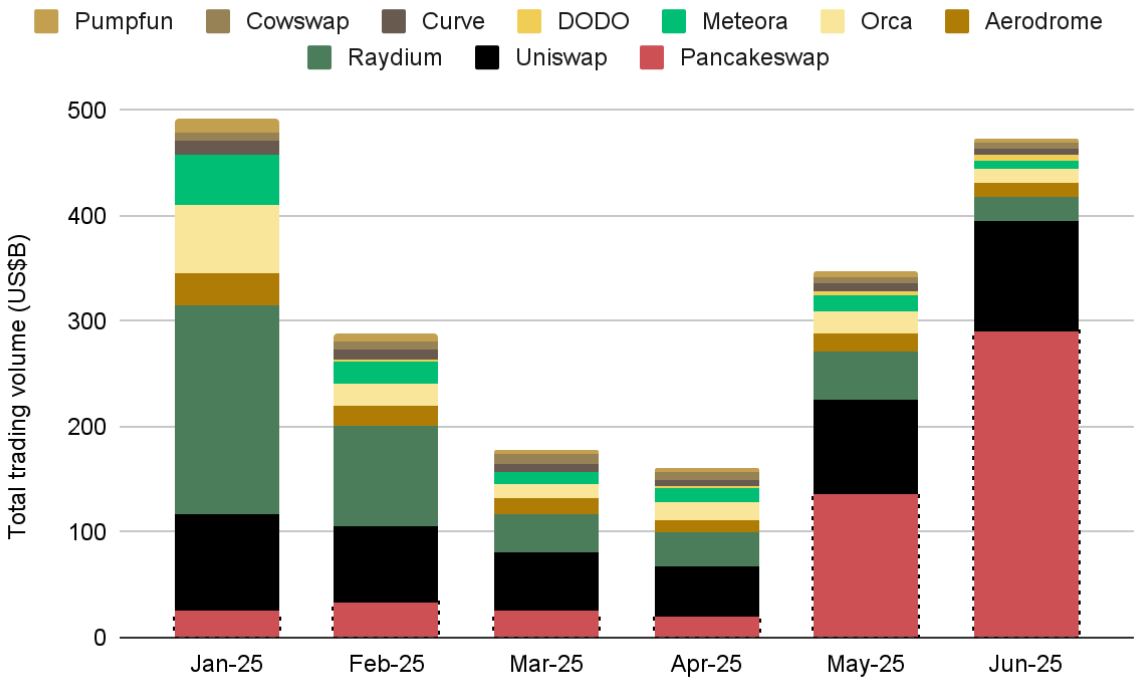



Source: Theblock, Binance Research, as of June 30, 2025

Including on-chain derivatives, total on-chain trading volume hit a record **US$567.6 billion** in January of this year and remained strong at **US$390.8 billion** in June, indicating that the enthusiasm was not fleeting. If this pace is maintained, the annualized trading volume will exceed **US$4.4 trillion**.

However, the distribution of this volume has fundamentally changed. **PancakeSwap's** (mainly on BNB Chain) market share reached **64%** in June, a significant rise from **16%** at the start of the year. Meanwhile, Solana-based Raydium's share fell most sharply, from nearly **25%** to **10%** in June. The primary reason for this shift was the **cooling of the meme coin trading frenzy on Solana**, which was once a market focus, and the gradual migration of this activity to PancakeSwap, which also launched official **Alpha airdrops and trading competitions**.

**Figure 47: Pancake's volume risen fast this year, while Raydium's has declined**



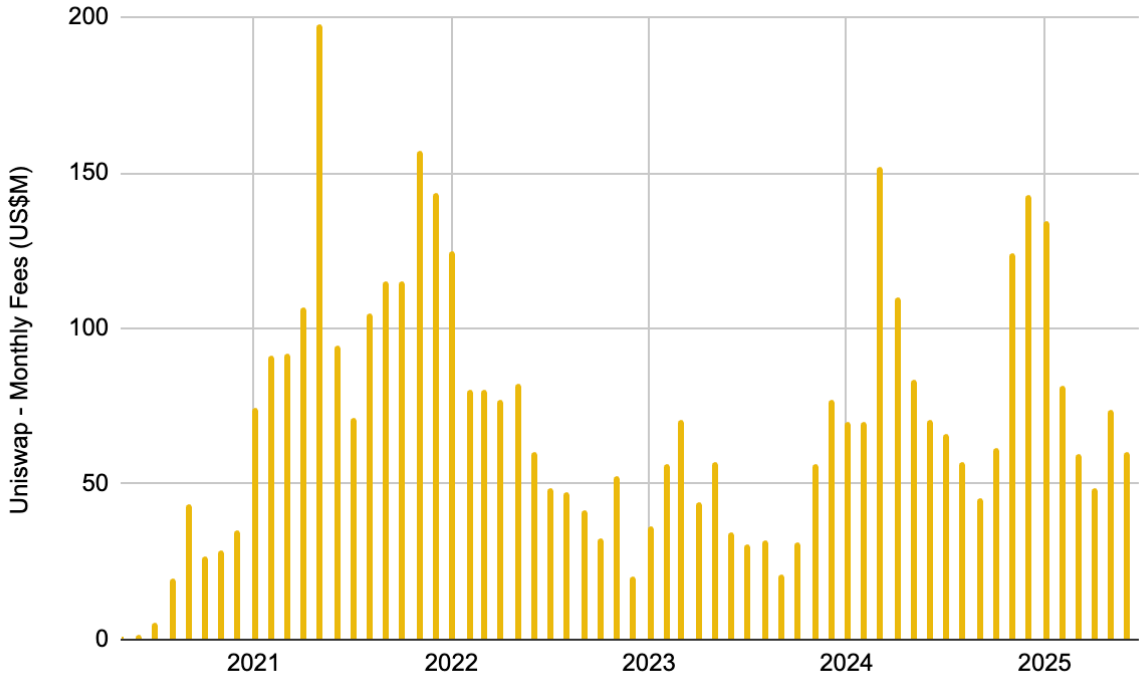

Source: Tokenterminal, Binance Research, as of June 30, 2025

**Uniswap's Core Position and the "Fee Switch" Debate**

Despite being surpassed by PancakeSwap in total trading volume, Uniswap remains the owner of the **largest liquidity pool** in the entire DeFi space, with a **TVL of US$4.81 billion**, more than **2.7 times** that of PancakeSwap. In H1 2025, the central narrative surrounding Uniswap was its "fee switch" governance proposal. The proposal aims to allocate a small portion of trading fees (currently 100% distributed to liquidity providers) to UNI token holders who stake and participate in governance.

This proposal has profound implications. Uniswap generated a staggering **US$354 million** in trading fees in the first half of this year, yet its protocol revenue was **0**. This perfectly illustrates the current model: the protocol creates enormous profits for liquidity providers, but the protocol itself and **UNI token holders do not directly capture this value.** Turning on the fee switch would completely change UNI's tokenomics, transforming it from a pure governance token into a productive asset with cash flow value.

**Figure 48: Uniswap generated US$354M fees in H1 2025**



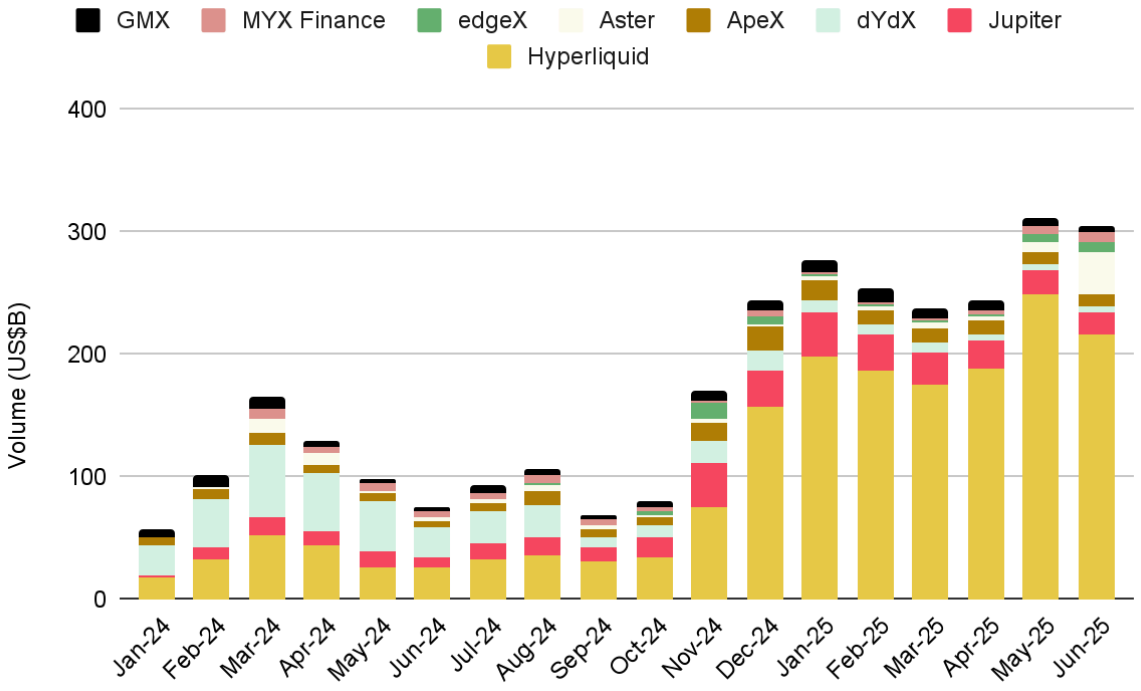

Source: Tokenterminal, Binance Research, as of June 30, 2025

However, the move has sparked intense community debate, focusing on whether it would weaken the incentives for liquidity providers and the potential regulatory uncertainties it might face. The Uniswap Foundation's Q1 2025 financial report also showed that its **operating funds primarily come from grants and donations, not from protocol-generated revenue,** further highlighting the urgency of value capture mechanism reform.

**The Boom in On-Chain Derivatives**

The on-chain perpetuals trading market, which began to explode last year, continued its momentum in H1 this year. Trading volume hit a record **US$382.5 billion in May,** with **Hyperliquid contributing over 60%** of that.

**Figure 49: Monthly perp DEX volume has soared since Q4 last year, led by Hyperliquid**




Source: Defillama, Binance Research, as of June 30, 2025

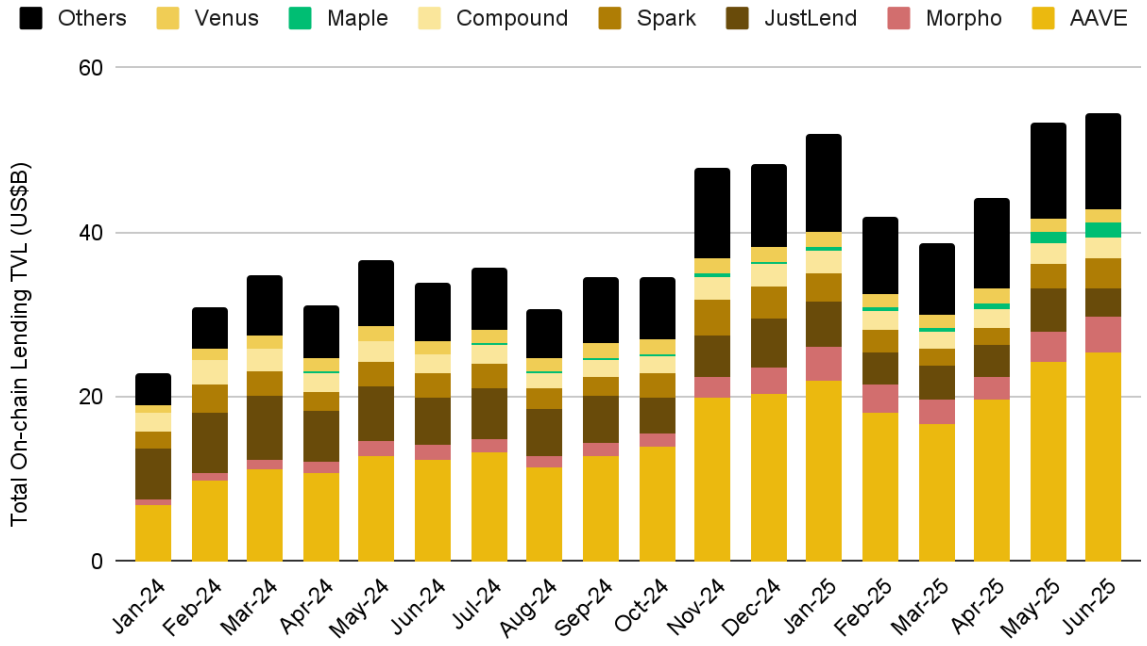
Hyperliquid is not an application deployed on a general-purpose L2, but an L1 blockchain built from the ground up for high-performance derivatives trading. By adopting a custom consensus algorithm (HyperBFT), Hyperliquid achieves sub-second transaction latency and order processing capacity of up to 200,000 per second, providing a user experience comparable to CEXs while retaining decentralization and transparency.

In H1, we have seen the decline of **dYdX & GMX**, the once leading on-chain derivatives platforms and ~~and~~ the **rise of Hyperliquid,** indicating that in the highly performance-demanding perpetuals market, the application-specific blockchain model has achieved an overwhelming victory in terms of trading volume. This may signal a future trend: as technology matures, more top-tier applications with extreme performance requirements may choose to "**graduate**" from being "tenants" on general-purpose L2s to building their own blockchains to achieve optimal user experience and value capture.

## Lending: New Highs Driven by Institutional Demand

As a cornerstone of DeFi, the lending market continued to mature in H1 2025, with its Total Value Locked (TVL) stabilizing above US$50 billion and at one point reaching an **all-time high of US$55.52 billion.**

**Figure 50: On-chain lending market reached an ATH in June 2025**




Source: Defillama, Binance Research, as of June 30, 2025

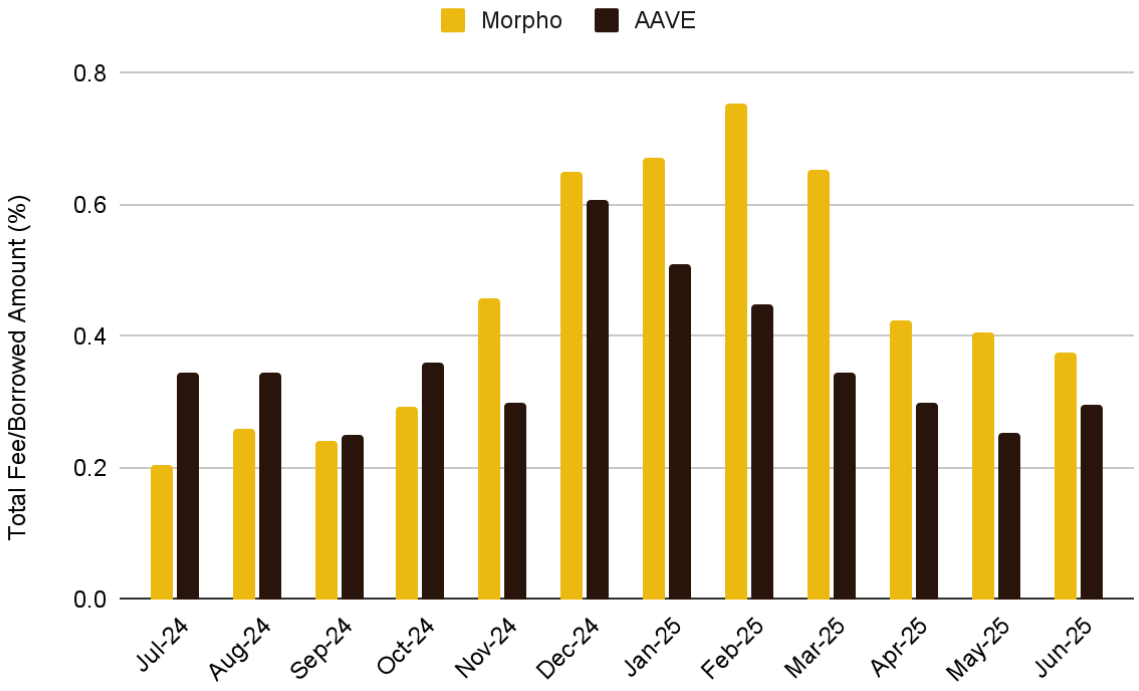
### The Dominant Position of Traditional Giant Aave

Aave remains the undisputed leader in the lending sector. The total assets locked in the Aave protocol amount to a massive **US$24 billion**, accounting for over 45% of the entire DeFi TVL. Its total outstanding loans exceed **US$16 billion**, demonstrating its deep liquidity and market trust. According to Token Terminal data, as of June 2025, Aave generated **US$4.9 million** in protocol fees in 30 days. In H1 2025, Aave's strategic focus was on the development of V4, promoting its native stablecoin GHO, and actively integrating RWAs as collateral to expand its business boundaries.

### Development Trends of Emerging Lending Protocols

The **Morpho protocol** has achieved rapid growth in recent years, gradually becoming a significant player in the lending market. By the end of H1 2025, Morpho's total active loans exceeded **US$2.3 billion**. During the same period, Morpho generated approximately **US$70 million** in total interest income for lenders, demonstrating high capital efficiency—this is equivalent to generating over **23%** of AAVE's fees from just **14%** of its active loans.

**Figure 51: Morpho has higher fee/borrowed amount ratio than AAVE**




Source: Defillama, Binance Research, as of June 30, 2025

Its customizable lending parameters facilitate the creation of products with specific risk-return profiles. As a "backend-as-a-service" platform, Morpho has been integrated by multiple protocols and applications. For example, the lending protocol **Seamless** migrated its liquidity from Aave v3 to Morpho. Institutional-grade wallet **Safe{Wallet}** and some regional exchanges have also chosen to integrate Morpho to provide lending-related services. This model, combining a centralized front-end with a decentralized back-end, promotes **wider user reach and ecosystem growth**.

**Modularity and Meta-Protocol Trends in the Lending Market**

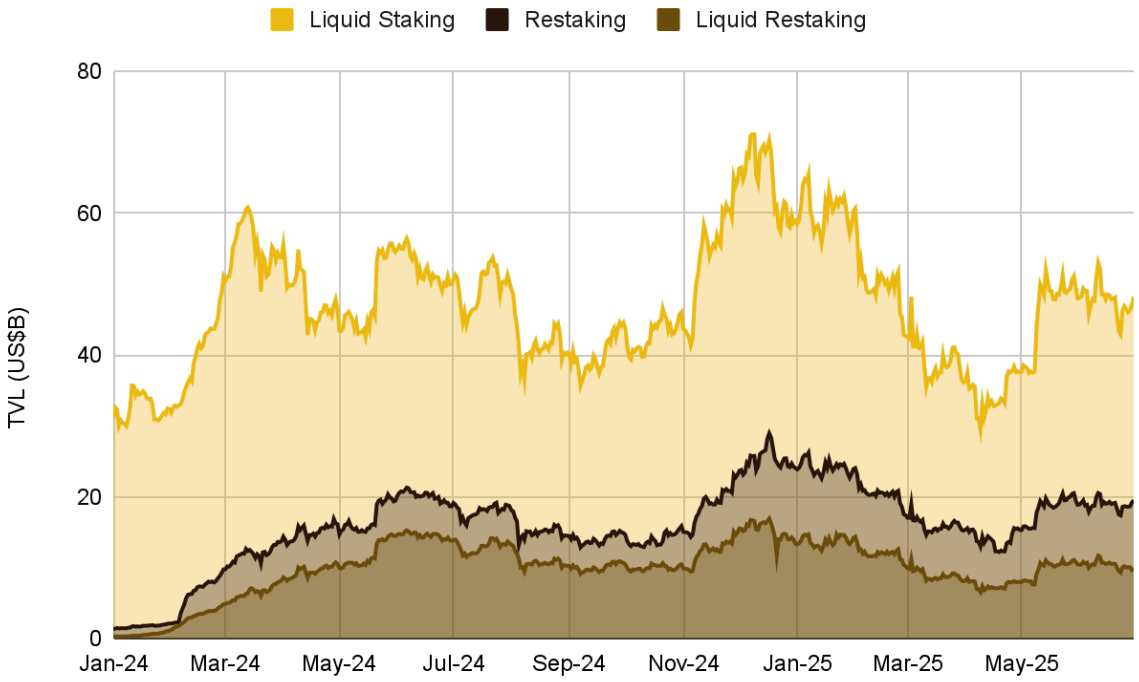
The DeFi lending space is likely to undergo a shift from monolithic protocols to modular, unbundled architectures. Traditional protocols like Aave determined collateral assets and risk parameters through governance, reflecting a degree of centralized management. In contrast, emerging meta-protocols like Morpho Blue **delegate some decision-making power to the market**, promoting the modularization of lending functions. Based on this, teams like Steakhouse Financial and Gauntlet can build vaults and financial products for different user needs on top of an efficient lending infrastructure.

This architectural shift suggests that future competition in the DeFi lending market could increasingly depend on the construction of **modular ecosystems.** The base layer will be supported by efficient, unbiased lending primitives, while the **upper layers will consist of risk managers, strategy vaults, and user applications, catering to diverse risk and return appetites**. Unbundling not only enhances capital efficiency but also accelerates the pace of innovation, allowing new products and markets to be launched more flexibly. The market position of **traditional lending protocols is being challenged** by this architectural evolution, reflecting the industry's overall trend towards a more open, layered ecosystem.

## Staking Economy: Restaking and Liquid Derivatives

In the first half of 2025, the staking economy based on Ethereum's Proof-of-Stake (PoS) evolved into a complex and powerful three-layer "Yield Stack," becoming the core of capital efficiency and risk innovation in DeFi. This stack, composed of base staking, liquid staking, restaking, and liquid restaking, is **interconnected and has a combined TVL of US$70 billion.**

**Figure 52: Evolution of Three-layer Yield Stacking Sizes (Non-stacked)**




Source: Defillama, Binance Research, as of June 30, 2025

### Layer 1: Base Staking and Liquid Staking

Base Staking and Liquid Staking is the foundation of the staking economy. Lido, the long-standing leader in this field, continued its dominance this year. As of the end of June, the ETH managed by Lido accounted for 25.6% of all staked ETH, with its TVL stable at around **US$22.6 billion.** By issuing liquid staking tokens (LSTs) like stETH, protocols like Lido unlock the capital of the otherwise locked ETH, allowing it to be a source of liquidity in DeFi for activities like lending and trading.

However, Lido's inflows have stagnated this year. While the total amount of staked ETH has increased by over 1 million since the beginning of the year, Lido's staked amount has decreased by about 540,000 ETH. Coinbase's locked assets have also seen a significant decline, decreasing by about 890,000 ETH. Meanwhile, Binance's locked assets have grown significantly by about 810,000 ETH, noticeably increasing its market share. This is followed by ether.fi, which grew by about 600,000 ETH.

**Layer 2: Restaking**

EigenLayer is a leading project in the Layer 2 space and the pioneers of restaking technology that. It allows users to "restake" their already staked ETH (or LSTs) to provide services for other protocols that require economic security (such as bridges, oracles, which are also known as Actively Validated Services) to earn additional returns. At the end of June, EigenLayer's TVL peaked at $11.4 billion, quickly becoming one of the top three protocols by TVL in DeFi. The emergence of EigenLayer has in essence created a "Security-as-a-Service" market, greatly enhancing the capital efficiency of Ethereum's base security.

**Layer 3: Liquid Restaking**

Building on the concept of restaking, Liquid Restaking (LRT) protocols emerged. Protocols led by ether.fi allow users to deposit assets for restaking and mint a liquid restaking token (LRT), such as eETH. This LRT represents the user's restaked position in EigenLayer, but it is itself liquid and can be reinvested into DeFi protocols for trading or as collateral. As a result, ether.fi's TVL experienced explosive growth in the first half of 2025.

The formation of this three-layer structure is an important sign of DeFi's maturation and increasing complexity. It has enabled a highly composable yield system, where users can stack returns from multiple sources: ETH base staking, providing security to Actively Validated Services (AVSs), and deploying LRTs across DeFi. In theory, this can push APYs as high as **8–9%**. This powerful capital gravity is one of the core drivers of TVL growth in the Ethereum ecosystem.

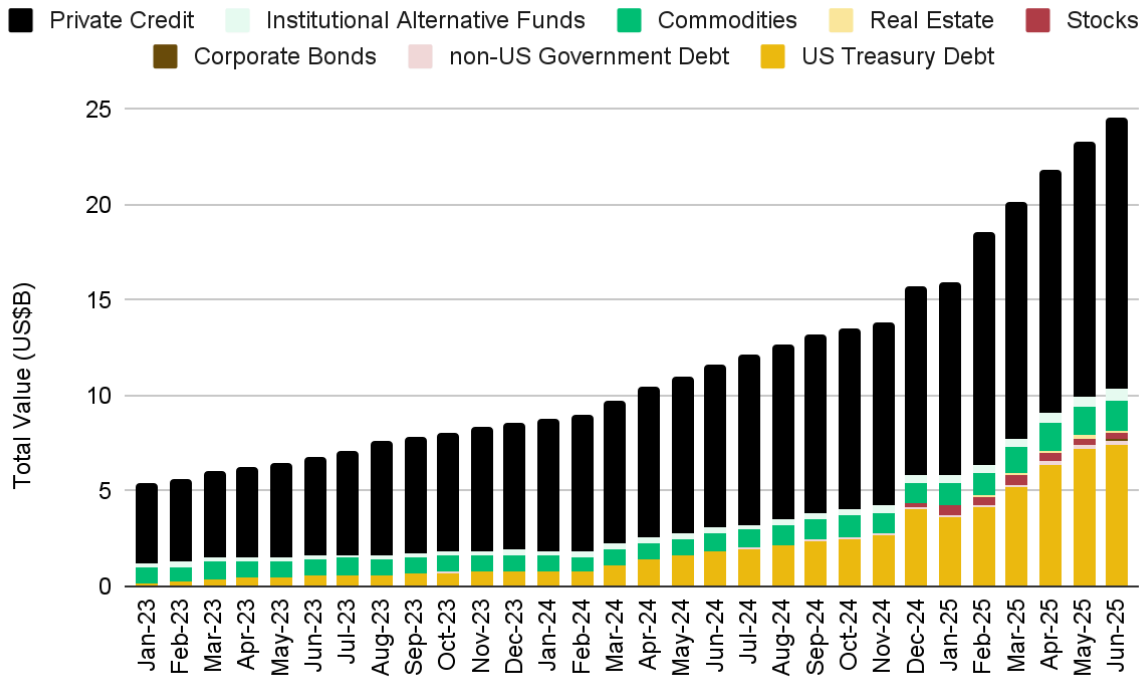
However, this highly leveraged and coupled structure also introduces new, systemic risks. A problem in any layer (for example, a large-scale slashing event in an AVS) could be transmitted through LSTs and LRTs, causing a chain reaction across the entire DeFi ecosystem. Therefore, risk management and monitoring of this emerging sector will be a key focus for the market in the second half of the year.

## Real-World Assets: A Growing Bridge to TradFi

H1 2025 witnessed an unprecedented convergence between traditional finance and DeFi, mostly catalyzed by RWAs.

By the end of June, the total value of on-chain RWAs (excluding stablecoins) had soared to **US$24.3 billion**, a 260% increase in the first half of the year alone – making it DeFi's most explosive institutional growth engine.

**Figure 53: Tokenized private credit leading the RWA market**




Source: RWA.XYZ, Binance Research, as of June 30, 2025

The market is led by **Securitize**, holding the largest share at 27% with a total value of **US$3.53 billion**. **Tradable** follows with a 16% market share and **US$2 billion** in total value. **Ondo** ranks third, showing strong momentum with a 7.32% increase and a 11% market share.

The core driver of this growth is "Tokenized Private Credit," a category that accounts for over **58% of the RWA** market. Private credit, which involves lending outside the traditional banking system, has historically been the exclusive domain of institutional investors, characterized by high barriers to entry and long lock-up periods. Through tokenization, these credit assets are transformed into digital assets that can be freely traded, composed, and used as collateral on-chain, greatly enhancing their liquidity and accessibility.

The rise of RWAs marks a fundamental shift for DeFi – transforming DeFi from a purely crypto-native ecosystem into a gateway for delivering more efficient financial infrastructure to the traditional world.

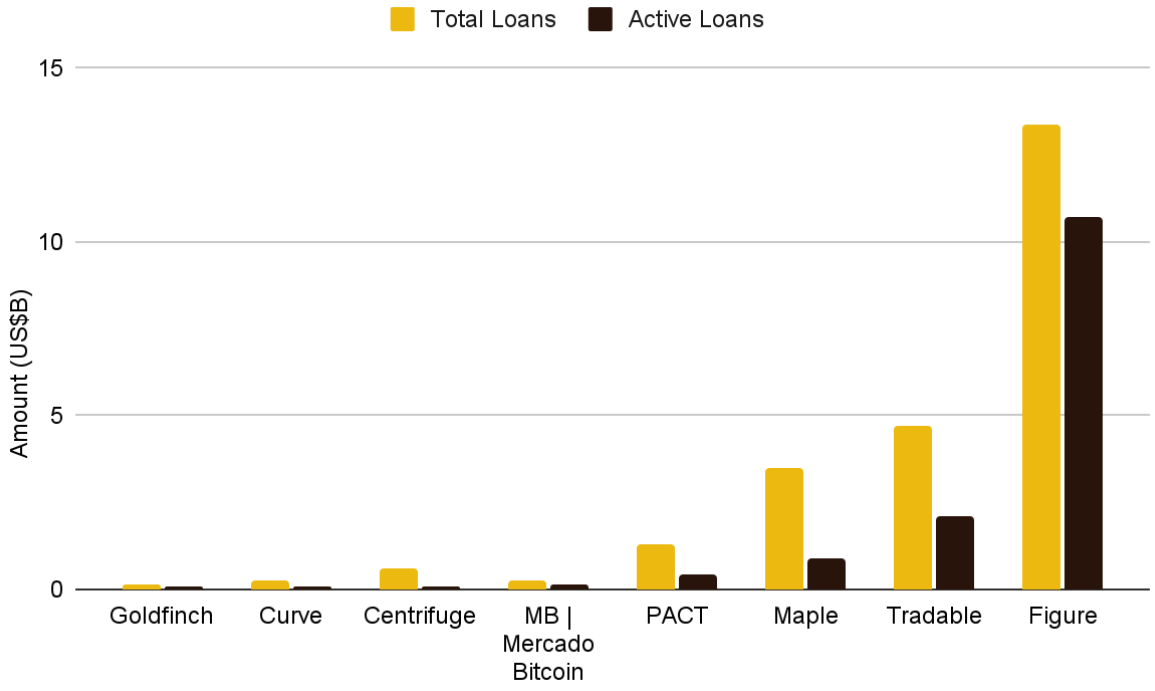
### On-Chain Private Credit: DeFi's Native High-Yield Engine

**Active Loan Value:** According to rwa.xyz, the total active assets in on-chain private credit have reached a high of **US$14.27 billion**, with an average annual percentage rate (APR) of approximately 10.33%. This makes it the largest single asset class within RWAs, offering DeFi users returns far exceeding those of traditional savings and government bonds.

### Key Protocols

Figure leads the private credit market with total loans of approximately **US$13.13 billion** and active loans around **US$10.61 billion**. Tradable follows with US$4.72 billion in total loans and **US$2.08 billion** in active loans, operating on the ZKSync Era network. Maple holds US$3.45 billion in total loans and US$816 million in active loans across multiple networks. PACT, operating on Aptos, has US$1.28 billion in total loans and US$420 million in active loans.

**Figure 54: Ranking of major private credit loan protocols**




Source: RWA.XYZ, Binance Research, as of June 30, 2025

### The Dual-Track Model of RWA Adoption

A deeper analysis of RWA growth data reveals two parallel but distinct adoption paths. **The first path is led by traditional financial giants like BlackRock and Franklin Templeton.** Their tokenized Treasury funds (such as BUIDL and BENJI) are highly compliant, permissioned products requiring KYC/AML verification. These products are essentially "walled gardens" tailored for TradFi participants, designed to bring traditional capital safely on-chain.

**The second path is DeFi-native, represented by the explosive growth of on-chain private credit.** This is a more permissionless, high-risk, high-reward arena. Protocols like

Figure and Tradable connect on-chain liquidity with real-world borrowing needs, offering yields far exceeding those of Treasuries. However, their risk profiles and due diligence requirements are also distinctly different from traditional financial products.

**Other Use Cases to Watch**

**Aave's "Horizon" Initiative:** In March 2025, leading lending protocol Aave Labs launched a strategic initiative called "Horizon" aimed at integrating institutional-grade RWAs into DeFi. The program allows institutions to use tokenized money market funds (MMFs) as collateral to borrow stablecoins like GHO and USDC on the Aave protocol, directly opening up liquidity channels between the two worlds.

**BlackRock's BUIDL Enters DeFi Protocols:** BlackRock's BUIDL (BlackRock USD Institutional Digital Liquidity Fund) is a landmark project signifying the entry of traditional financial giants into DeFi. In May 2025, sBUIDL was integrated with the DeFi protocol Euler Finance on the Avalanche blockchain, allowing sBUIDL tokens to be used as collateral for borrowing and lending activities. This integration was orchestrated by Re7Labs on the Avalanche network, with security ensured by Chainlink data feeds for reliable pricing and enhanced safety.

**Ethena Labs and Securitize Partnership:** In June 2025, Ethena Labs and Securitize enabled 24/7 atomic swaps between USDtb and BlackRock's BUIDL, allowing asset holders to switch between a programmable dollar and tokenized treasuries without intermediaries, enhancing trading options and liquidity for both CeFi and DeFi participants.

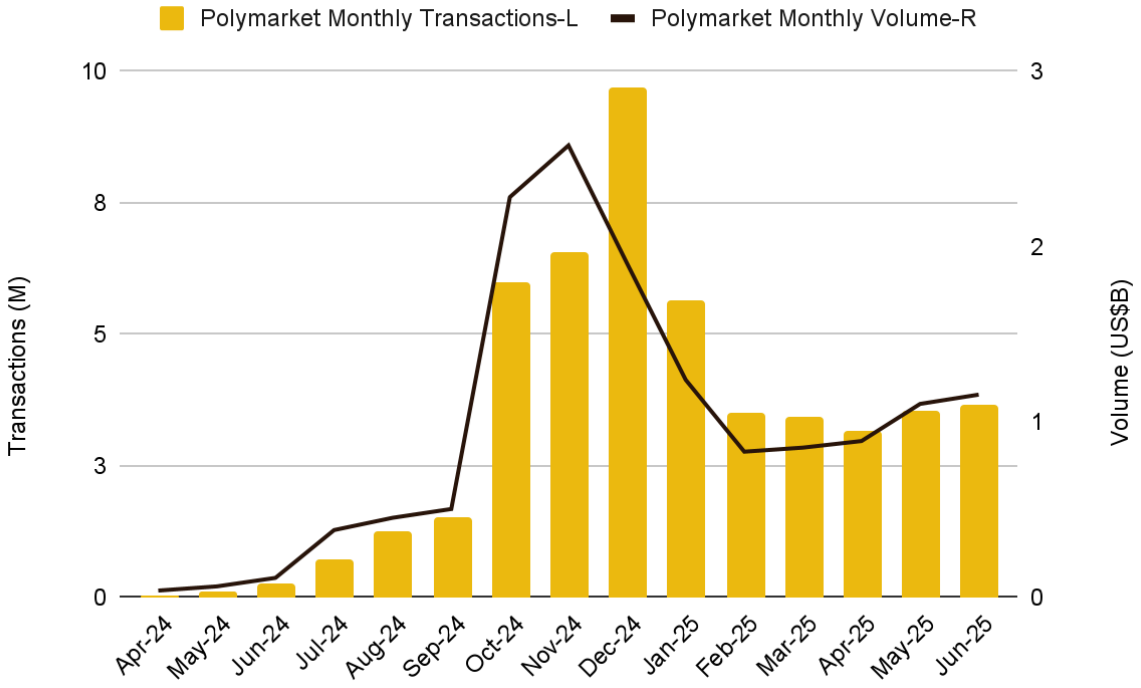
**Ondo Finance:** In February 2025, Ondo announced the upcoming launch of Ondo Chain, designed specifically for institutional-grade RWAs to accelerate the on-chain adoption of traditional financial products. In the same month, they announced the Ondo Global Markets platform to bring stocks, bonds, and ETFs to the blockchain. In June, they formed the Global Markets Alliance with the Solana Foundation and others to standardize tokenized RWAs, promoting the integration of DeFi and traditional finance.

**Launch of the Grove DeFi Protocol:** In June 2025, Grove, as part of the Sky ecosystem (formerly MakerDAO), launched with a commitment of US$1 billion for tokenized credit strategies. The initial US$1 billion allocation is invested in the Janus Henderson Anemoy AAA CLO Strategy (JAAA), managed by Janus Henderson and built on Centrifuge. This initiative brings traditional credit investments like CLOs into DeFi.

## Prediction Markets: Breakthrough Developments

Although interest in prediction markets declined somewhat in H1 2025 following the election hype, trading volume in June still exceeded US$1.1 billion, with over 400K monthly active users and more than 3 million monthly transactions. Under the regulatory framework of the U.S. Commodity Futures Trading Commission (CFTC), Kalshi received a favorable ruling in May 2025 when the CFTC rejected an appeal, potentially paving the way for the legalization of political prediction markets. Increasing evidence suggests that prediction markets are evolving beyond pure financial speculation into decentralized tools for information and sentiment analysis, significantly broadening their application scenarios and market potential.

**Figure 55: After last year's election hype, Polymarket entered steady growth phase**




Source: Dune, Binance Research, as of June 30, 2025

Polymarket remains the undisputed leader in the decentralized prediction market sector accounting for approximately 90% of the industry's total trading volume, making it the de facto industry standard.

Built on the Polygon blockchain, Polymarket leverages low transaction fees and high throughput, using USDC as its sole trading currency. A key to its success is an extremely user-friendly interface that abstracts much of the underlying blockchain complexity, lowering the entry barrier for mainstream users.

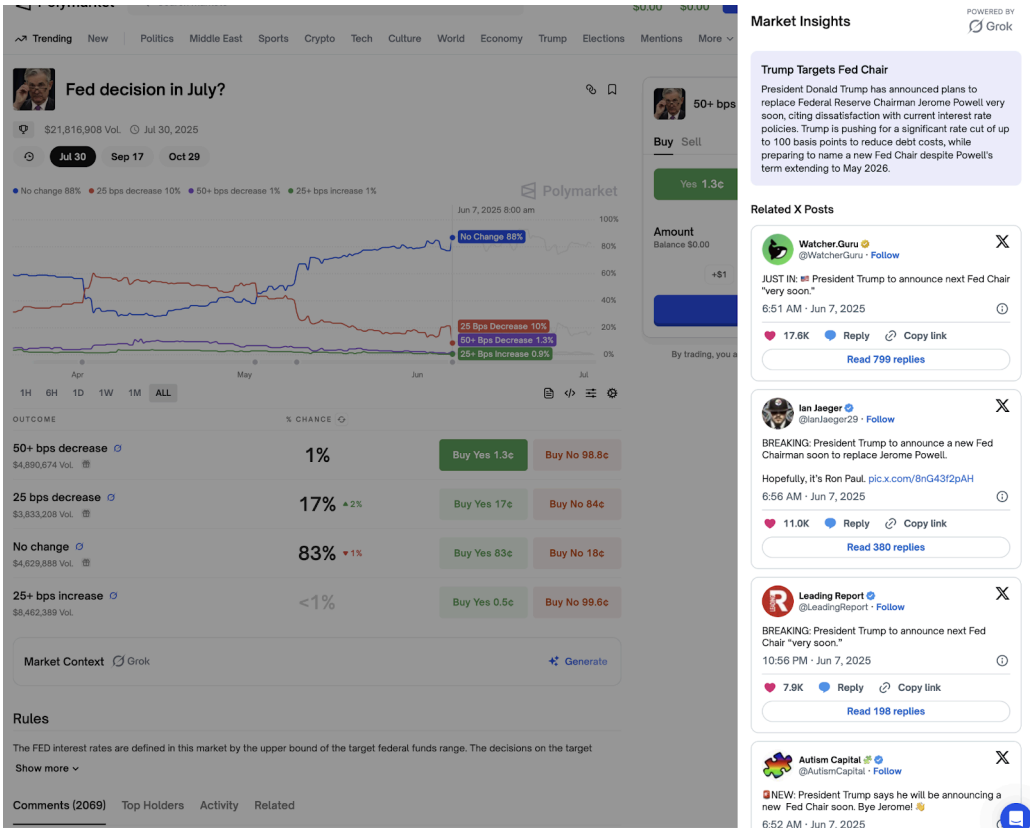
Polymarket's growth strategy centers on creating markets around high-profile, culturally relevant events such as politics, sports, and pop culture, which greatly stimulates user engagement. The platform has successfully positioned itself as a real-time information source, with its data integrated into professional financial tools like Bloomberg Terminal, signaling its influence beyond the crypto community into the mainstream.

In 2025, Polymarket achieved several major milestones, including reaching a US$1 billion valuation, entering the “unicorn” club, forming a transformative partnership with social media giant X, and being named one of Time magazine’s 100 Most Influential Companies.

**Case Study: Polymarket and X Partnership – The Dawn of “News 2.0”**

On June 6, 2025, social media platform X officially announced Polymarket as its “official prediction market partner.” This collaboration aims to reshape information dissemination and verification through deep integration across three pillars. It represents a critical step for the decentralized prediction market industry to break out of the crypto niche and achieve large-scale mainstream adoption.

**Figure 56: Prediction markets leverage information and AI analysis from X**




Source: Polymarket, Binance Research, as of June 30, 2025

1. **Pillar One-Polymarket Data:** Real-time prediction data, odds, and charts from Polymarket will be directly integrated into X, likely via embedded “X Cards” in tweets. This provides market-driven, quantitative context to news and discussions on X, allowing users to intuitively gauge event probabilities.
2. **Pillar Two-X’s Real-Time Information Feed:** X’s vast stream of real-time posts and news will feed back into Polymarket. Users analyzing markets on Polymarket can view related live X content, better understanding the factors driving market price movements.
3. **Pillar Three-Grok AI Analysis:** Elon Musk’s AI, Grok, will serve as an analytical bridge, using X’s real-time data to provide contextual analysis for Polymarket markets and leveraging Polymarket’s probability data to offer more insightful responses to X users. This creates a powerful synergy of “collective intelligence (Polymarket) + real-time data (X) + artificial intelligence (Grok).”

Public statements from both CEOs reveal the grand vision behind this partnership, which goes far beyond a simple commercial collaboration.

- **Shayne Coplan (Polymarket CEO)** envisions "News 2.0" – a future news era "optimized for truth, rooted in transparency, and anchored in reality." The goal is to help users "instantly understand breaking news and make informed decisions about the future," elevating Polymarket from a betting app to the next-generation information verification tool.
- **Linda Yaccarino (X CEO)** acknowledges that Polymarket has become "a primary real-time information source for many X users." The partnership aims to enhance X's value as a "truth-seeking engine" through "a series of innovative product integrations" that bring X's data and technology to Polymarket users.

**Implications**

The Polymarket-X partnership represents a direct **challenge to traditional media** institutions by attempting to create a new, decentralized **"source of truth**." Coplan's references to "News 2.0" and "20th-century media giants" reflect a deliberate strategic positioning, portraying the collaboration as a disruptive force in the information domain. The core argument is that **market-driven probabilities, backed by real money from a global user base**, offer a more reliable and less biased source of truth than traditional news organizations. By embedding this mechanism directly into X, Musk and Coplan aim to build a parallel information ecosystem where **"the market" serves as the ultimate arbiter of reality**. This constitutes a far-reaching, high-risk experiment in information theory and media.

At the same time, the partnership is a calculated move by Polymarket to **mitigate regulatory risks**, particularly from the CFTC in the U.S. By integrating with X's hundreds of millions of users, Polymarket can rapidly expand its global user base. If it becomes an indispensable core feature for a vast global audience, any single regulator – especially in the U.S. – **would face significant political and practical challenges in effectively shutting down or restricting its operations**. This exemplifies a Silicon Valley "**move fast, break things**" approach applied to finance and information, aiming to make the product so essential that regulatory frameworks must adapt rather than constrain it. This high-risk, high-reward strategy is reflected in Polymarket's recent **$1 billion valuation,** signaling strong investor confidence.

# 6.3 Outlook: Potential Catalysts and Risks

**Key Catalysts**

**Regulatory Clarity:** The final passage of the GENIUS Act or DeFi related legislation in the U.S./EU would clear a key hurdle for large-scale institutional adoption of DeFi, serving as a powerful tailwind for the industry. However, decentralized stablecoins may face headwinds due to U.S. regulatory requirements that resemble those imposed on traditional banks.

**Technological Maturity and User Experience Improvements:** The continued optimization and popularization of Layer 2 solutions, especially networks with strong ecosystem support like BNB Chain, Base or institution customized RWA chains will effectively reduce user costs, improve the experience, and attract more mainstream users.

**Introduction of New Asset Classes:** The continued expansion of the RWA sector and the emergence of more innovative financial products (such as on-chain interest rate swaps and advanced options strategies) will constantly push the boundaries of DeFi.

**Key Risks**

**Security:** The complexity of DeFi is increasing, especially in the highly coupled restaking ecosystem, where new attack vectors may be discovered. According to a report by CertiK, losses from hacking in the first half of 2025 have already reached **US$2.5 billion**, with most stemming from infrastructure attacks like private key compromises. This serves as a stark reminder that security remains the industry's Achilles' heel.

**Systemic Protocol Risks:** Platforms like Ethena and EigenLayer, which are massive in scale and deeply integrated with numerous other protocols, have become systemically important. If they encounter problems, the impact could quickly spread through asset prices and liquidity channels to the entire DeFi ecosystem, triggering a chain reaction.

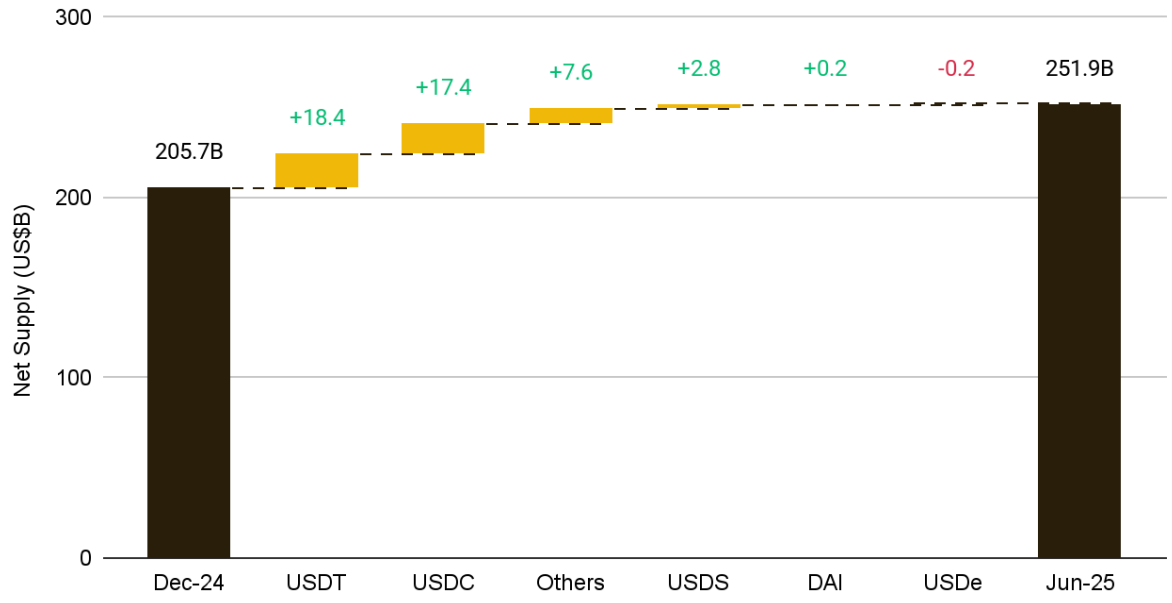
**Macroeconomic and Geopolitical:** Changes in the global macroeconomic environment, such as unexpected shifts in interest rate policy or the escalation of geopolitical conflicts, remain significant external risks. These factors directly affect global market liquidity and risk appetite, which DeFi is not totally immune to.

# 07 / Stablecoins

## 7.1 Overview

The first half of 2025 marked a significant inflection point in the evolution of stablecoins, both in scale and institutional legitimacy. The total market capitalization of stablecoins has far exceeded the previous peak of US$174B that it reached before the Terra-Luna crash in 2022, rising ~22% in H1 of 2025 from ~US$205 billion in December 2024 to **a peak of over US$250 billion by June 2025**, reflecting both renewed crypto market confidence and accelerating real-world adoption. This growth was driven not only by increased retail demand but also by a wave of institutional activity that signaled growing trust in stablecoins as financial infrastructure.

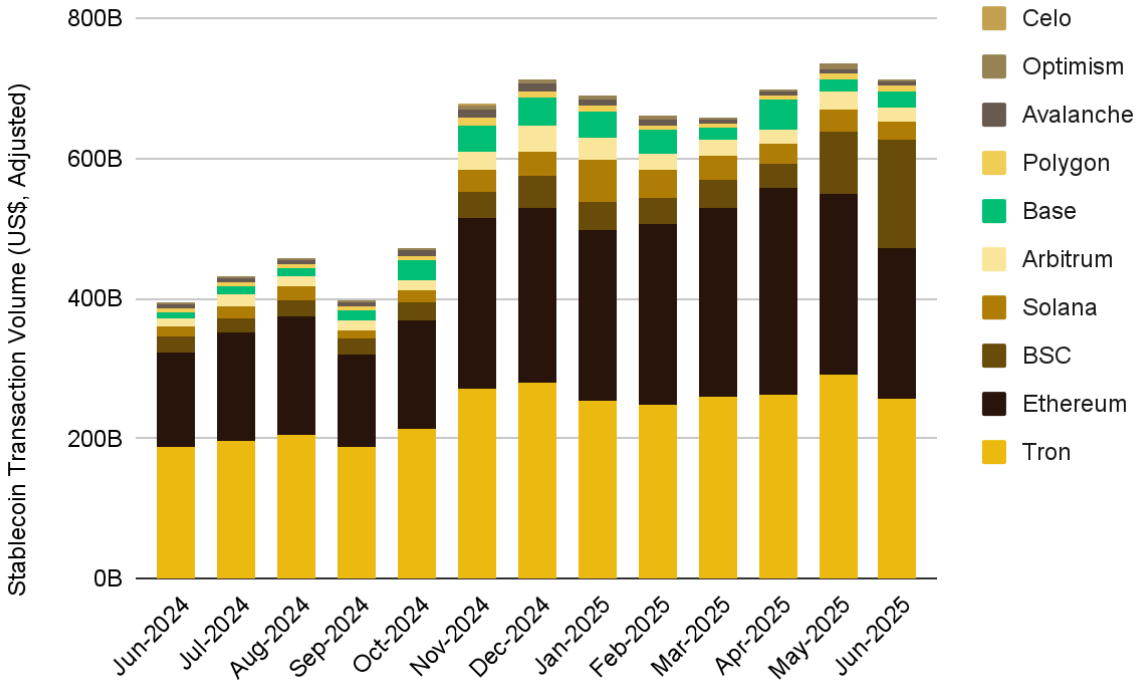
**Figure 57: Total stablecoin supply has grown over 22% this year, reaching new highs of US$251.9B**




Source: DefiLlama, Binance Research, as of June 30, 2025

On top of their widespread use in DeFi and trading on exchanges, we've seen stablecoin use in global payments and settlements increase dramatically. The Visa stablecoin dashboard, which adjusts for inorganic and botted activity, showed stablecoin transaction volumes hitting new all time highs of US$749B for the month of May.

**Figure 58: Adjusted monthly stablecoin transaction volume hit an all-time high in May 2025 of US$749B**




Source: Visa, Binance Research, as of June 30, 2025 (view the Visa dashboard adjusted stablecoin volume methodology here)

Breaking things down into the individual stablecoins, most have grown year-on-year. While USDT remains the largest by market capitalization, USDC comes in as the fastest growing, capturing an additional 5.7% market share so far in 2025.

**Figure 59: Overview of changes in market capitalization and market share of the largest stablecoins**

| Stablecoin | | Market Cap (US$B) | | Market Share (%) | |
|---|---|---|---|---|---|
| | | Jun-25 | YoY (%) | Jun-25 | YoY (%, absolute) |
| | USDT | 158 | +40.3 | 62.6 | -7.4 |
| | USDC | 61.3 | +92.2 | 24.2 | +4.4 |
| | USDe | 5.3 | +47.2 | 2.09 | -0.11 |
| | USDS* | 8.57 | +68.0 | 3.36 | +0.26 |
| | USD1 | 2.20 | ∞ | 0.87 | +0.87 |
| | FDUSD | 1.22 | -32.3 | 0.48 | -0.62 |

Source: DefiLlama, Binance Research, as of June 30, 2025
*Market cap includes that of USDS and DAI

**Tether's USDT and Circle's USDC continue their largely unfettered dominance**, capturing a combined 92.1% of the total stablecoin market share, continuing to display the power of their early-mover advantage and compounding network effects.

Alongside growing adoption as a medium for payments, we also saw notable institutional developments including Circle's public listing on the NYSE, which **raised over US$600 million and established USDC's issuer as the first publicly traded stablecoin company** in the U.S. Simultaneously, traditional financial institutions such as Société Générale, ANZ, and JPMorgan launched or expanded their own fiat-backed digital assets and programmable money pilots. Major fintech and payment providers – such as Stripe – rolled out stablecoin-based products for cross-border settlements in over 100 countries.

In June 2025, retail giants Walmart and Amazon also announced they were exploring the issuance of their own dollar-based stablecoins. Stablecoin-based payment rails could enable faster, cheaper transactions, helping these retail giants save billions in banking fees.

Together, these milestones suggest that **stablecoins are no longer a niche crypto primitive**, but an increasingly critical layer in the architecture of global digital finance. With the United States making significant headway on stablecoin regulation as well, the future of stablecoins looks bright, as a tool for retail, institutional, and governmental activity.

***"We are going to keep the U.S. the dominant reserve currency in the world, and we will use stablecoins to do that."***

– 79th Secretary of the Treasury Scott Bessent

# 7.2 The Duopoly

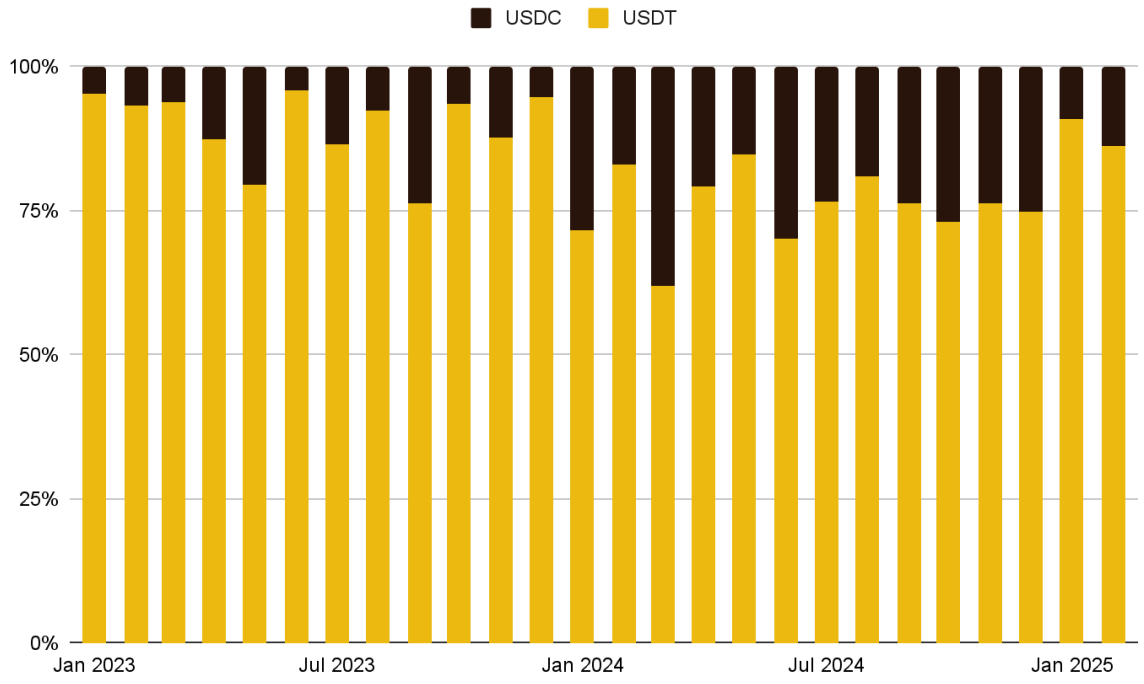
The stablecoin market remains heavily concentrated in two incumbents: Tether's USDT and Circle's USDC. As of mid-2025 these two dollar-pegged tokens collectively represent roughly 92.1% of all stablecoin value in circulation. Both saw significant absolute growth in H1 2025, even as their battle for market share intensified with shifting dynamics:

In a nutshell, **USDT and USDC remain the two pillars** of the stablecoin world. USDT's liquidity and longer history keep it in the lead, especially for trading purposes, but USDC's growth reflects a diversifying market that values compliance and integration with traditional finance. Together, these two have effectively formed a duopoly, even as they now face a gradually widening field of competitors (ranging from **PayPal's PYUSD** to **decentralized stables** to newer corporate entrants like **Ripple's RLUSD**, which launched in late 2024 as an enterprise-focused USD stablecoin. So far in 2025, however, no challenger has seriously threatened the **hegemony of USDT and USDC**, which continue to set the benchmark for stability and acceptance.

## Tether's USDT

USDT retains its crown as the **largest stablecoin** by a wide margin. As of June 2025, USDT's market capitalization hovered around **US$153–156 billion** – an increase from roughly US$138B at the start of the year and marking a new record high for Tether. This puts USDT at approximately **60–62% of the total stablecoin market cap**. Tether also continues to dominate in terms of payments, accounting for 86.1% of payment transactions to USDC's 13.9% in February 2025 according to **a research paper by Artemis published earlier this year**. Year-on-year however, USDC seems to be making headway on this front, increasing its share of payment transactions over the past two years from the 4.8% share it held in February 2023.[94]

**Figure 60: Tether continues to account for the majority of payment transactions used to settle flows for firms, clocking in 86.1% in February 2025**

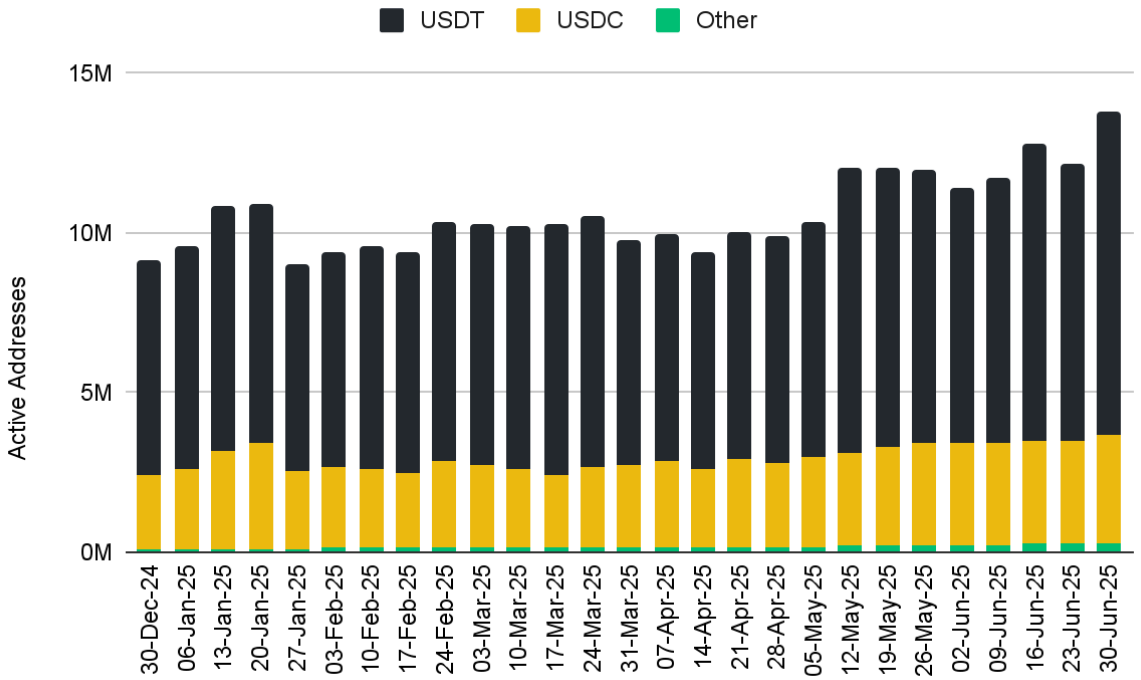



Source: Artemis, Binance Research, as of February 29, 2025

Tether's growth has been driven by its first-mover advantage and deep integration across crypto trading venues: USDT remains the quote asset of choice on many exchanges (especially in Asia), and it is widely used on **high-throughput chains like Tron**, which alone currently carries about 50% of USDT's supply[95]. However, despite growing in absolute terms, USDT's **market dominance has edged down** from over 70% a year ago to roughly 67% by mid-2025. This slight dip in share is partly due to the resurgence of USDC and the emergence of newer stablecoins.

To go with its dominance on the payments front, Tether also holds the lion's share of active addresses as compared to the other stablecoins, accounting for ~75% of active addresses as of June 2025.

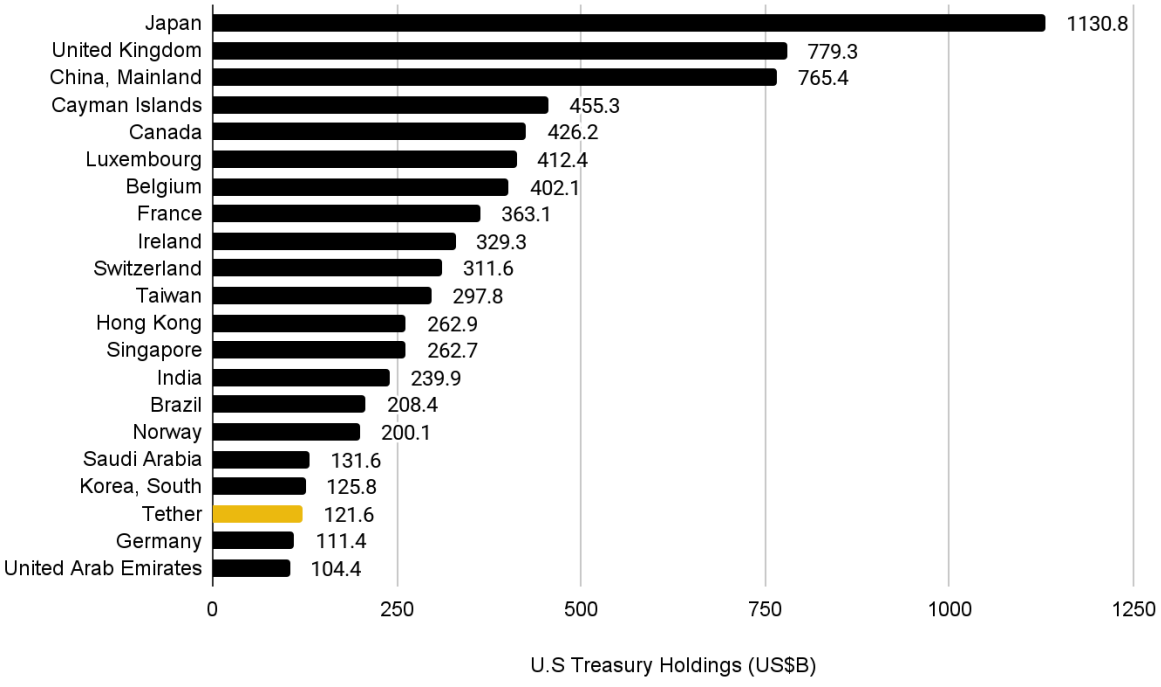
**Figure 61: Tether accounts for ~73% of active addresses that utilize stablecoins**




Source: Artemis, Binance Research, as of June 30, 2025

Over the past few years, Tether has also worked to **reinforce trust** in USDT's peg through increased transparency and diversification. The company reports that over **81% of its US$150+ billion reserves are held in cash, cash equivalents, and short-term deposits, and U.S. Treasuries**[96]. Tether's holdings of U.S. Treasury bills alone neared **US$120 billion in Q1 2025**, surpassing the foreign T-bill holdings of major countries like Germany[97].

**Figure 62: Tether is the 19th largest holder of U.S. Treasuries globally**




Source: U.S. Department of Treasury, Binance Research, as of March 2025

### Financial Powerhouse

Tether's dominance is backed by one of the strongest balance sheets in crypto. The company reported **US$13.7 billion in net profits for 2024**, and **US$1 billion in Q1 2025 operating profit**, fueled largely by interest income from its reserve assets.

As of Q1 2025:

- Over **81% of Tether's US$150B+ reserves** were held in cash, cash equivalents, and short-term U.S. Treasuries.
- USDT's **U.S. Treasury holdings alone approached US$120 billion**, surpassing the T-bill exposure of some G7 nations.
- Additional reserves included **~100,000 BTC and 50+ tons of gold**, supporting both asset diversity and confidence in the peg.

Tether has used its profits not only to bolster reserves but also to deploy strategic capital:

- **US$755M investment in Rumble** (Dec 2024)
- **US$1.12B investment in Adecoagro** (March 2025)

### Infrastructure: The Launch of Plasma

In early 2025, Tether announced **Plasma**, a new blockchain purpose-built for stablecoin usage. Jointly led by Tether, Bitfinex, and select venture partners, Plasma is a **Bitcoin sidechain with EVM compatibility**, designed to offer:

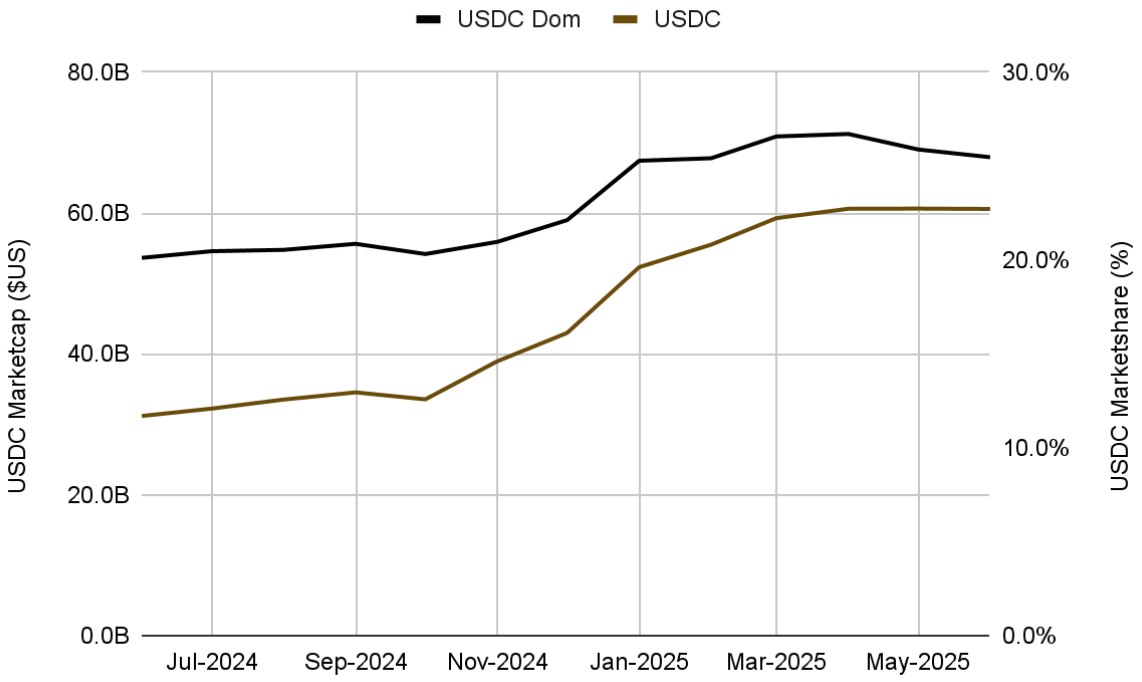
- **High-throughput, low-cost settlement** for USDT
- **HotStuff-based BFT consensus** for rapid finality
- **Gas fees payable in USDT or BTC**, with support for zero-fee transfers
- **Confidential transactions with compliance filters**

The network periodically anchors to Bitcoin for security while supporting Ethereum-like programmability. Targeted for launch later in 2025, Plasma aims to be a **dedicated "stablecoin highway"**, optimizing remittances, payments, and micropayments without the congestion of general-purpose chains.

## Circle's USDC

**USDC**, the second-largest stablecoin by market cap, has staged an impressive resurgence in 2025. As of June, its circulating supply had grown to **US$61–62 billion**, up from ~US$42 billion at the end of 2024 – a **94% increase** in just six months. This pushed USDC's market share from ~20% to **~25.5%**, making it the fastest-growing major stablecoin in H1 2025.

**Figure 63: USDC's market capitalization and market share increased by 94% and 5.4% respectively in the first half of 2025**




Source: DeFiLlama, Binance Research, as of June 30, 2025

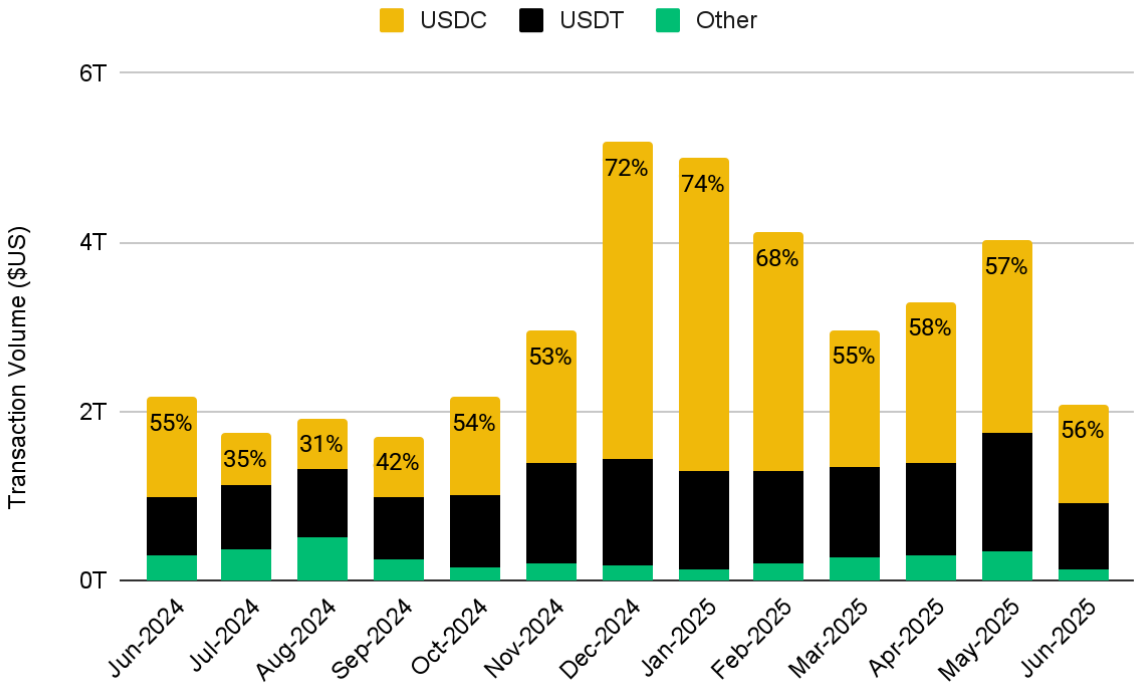
After a dip in market share during 2023, Circle's return to growth stems from strategic moves across regulation, product development, and global market entry. Notably:

- In 2024, Circle became the **first stablecoin issuer licensed under Europe's MiCA regulation**, positioning USDC as the compliant option for exchanges and fintechs operating in the EU. Binance, for instance, shifted European users from USDT to USDC in early 2025 to comply.

- Circle expanded aggressively in **high-remittance corridors** – particularly in Latin America, Southeast Asia, and Africa – where USDC is now integrated into mobile apps, e-commerce platforms, and cross-border payment services.

- On **low-fee chains** like Base and Solana, USDC has overtaken USDT in **transaction volume** – at one point accounting for **74% of stablecoin volume** in January 2025 and holding a **57% share** in May.

**Figure 64: USDC maintains its lead over USDT in terms of transaction volume, peaking at 74% of total stablecoin volume in January 2025, and coming in at 56% in June 2025**




Source: Artemis, Binance Research, as of June 30, 2025

Circle's USDC has also made significant progress to becoming an institutionally-recognized payment token. In June 2025, Shopify announced early access to a new feature that allows merchants to **accept USDC** from customers globally on the Base network, using their existing payment and order fulfillment flows – with no additional set-up or gateways required. Customers can pay with USDC on Base from hundreds of supported crypto wallets, on guest checkout and with Shop Pay.

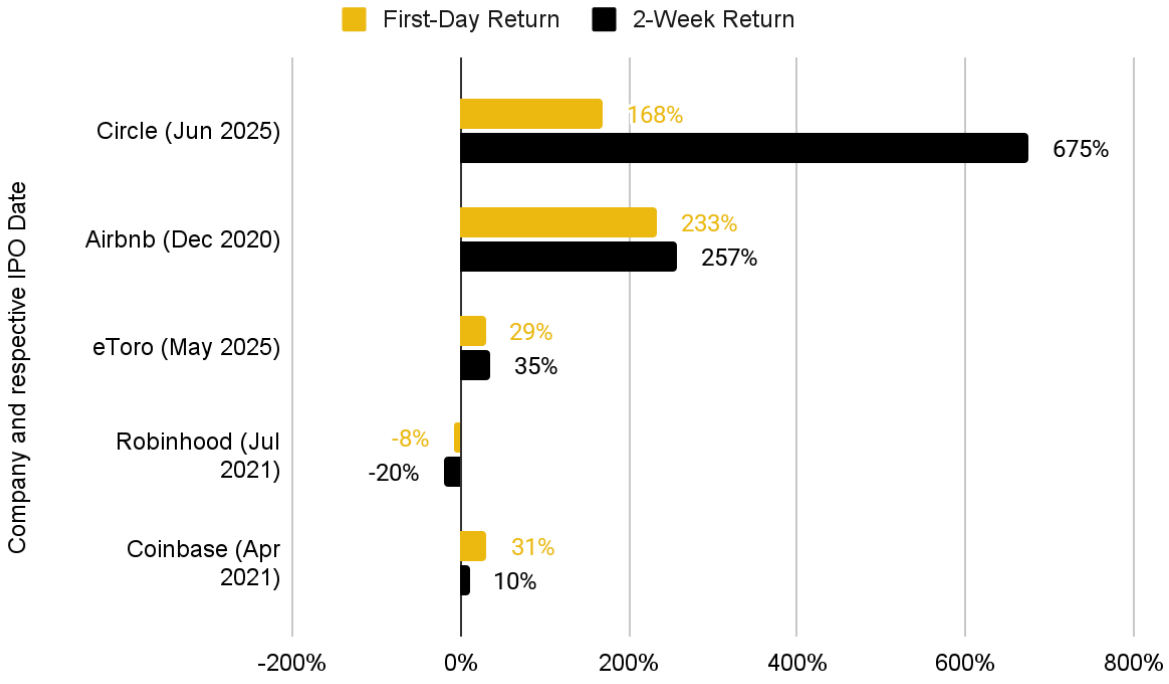
Circle also has a competitive edge on the regulatory front, being the only major provider to be compliant with the EUs MiCA regulation. As a U.S.-listed company, Circle could also stand to benefit significantly from stablecoin legislation coming out of the US, such as the incoming GENIUS act.

### Landmark IPO

Circle's June 5, 2025, IPO on the **New York Stock Exchange (NYSE: CRCL)** marked a turning point for stablecoin issuers. After a failed SPAC attempt in 2022, Circle's traditional IPO drew resounding investor interest. The stock surged from its **US$31 listing price to US$200 on day one**, and rallied over **7×** in the following two weeks – one of the best-performing fintech IPOs in years.

- **First-day return**: +168%
- **Two-week return**: +378%
- **Capital raised**: Multi-billion-dollar infusion, fueling international expansion and new product launches

**Figure 65: Circle's IPO stands as an outlier in terms of performance compared to other fintech stocks in recent years**




Source: Trading View, Binance Research, as of June, 30 2025

The IPO also introduced a **new level of financial transparency**, with Circle now publishing audited financials — boosting trust in stablecoin issuers. The market's reaction suggests growing investor appetite for **regulated crypto infrastructure plays**, especially amid favorable U.S. policy shifts.

### Market and Product Expansion

H1 2025 saw Circle deepen USDC's reach:

- **Multichain Launches**: Native USDC deployments expanded to **Arbitrum, Cosmos IBC**, and other Layer-2s, with interoperability support from Wormhole.

- **TradFi Integration**: Circle partnered with **Intercontinental Exchange (ICE)** to pilot **USDC and USYC (a yield-bearing stablecoin)** for institutional settlement processes – signaling stablecoins' potential integration into traditional financial market rails.

- **Retail Payments**: Shopify began enabling USDC payments natively on Base via Shop Pay and guest checkout, accessible from hundreds of wallets – streamlining stablecoin commerce without merchant-side changes.

- **Local Currency Stablecoins**: Circle continued scaling **EUROC** (its euro-backed stablecoin) and hinted at a **GBP stablecoin**, expanding its fiat on-chain portfolio.

### Regulatory Advantage and Compliance-Led Growth

Circle's regulatory posture has become a core differentiator, with:

- **MiCA compliance in Europe**

- **BitLicense in New York**

- **MPI license in Singapore**

- **Public backing of the U.S. GENIUS Act**

Circle has positioned itself as the most legally aligned issuer in the space. This became evident in March, when Binance was forced to delist several non-compliant stablecoins in the EU – USDC was spared due to its full MiCA adherence.

Circle's leadership in shaping policy has paid off. CEO **Jeremy Allaire**'s regular testimony to U.S. lawmakers helped influence stablecoin frameworks, and the passage of the GENIUS Act in Q2 2025 led to a **34% single-day rally** in CRCL stock.

# 7.3 Major Institutional Developments: Stablecoins Go Mainstream

2025 has marked a clear inflection point in the evolution of stablecoins. Once viewed primarily as tools for crypto-native traders, they are now being adopted – and in some cases issued – by the world's largest banks, corporations, and fintech platforms. A wave of institutional activity in H1 2025 underscores stablecoins' growing role as core infrastructure for both financial and consumer-facing applications.

## Banking Sector: Deposit Tokens and Interbank Settlement

Traditional banks have embraced stablecoins as an upgrade to legacy payment rails. **JPMorgan** remains the most advanced, with its **JPM Coin** system now rebranded under the **Kinexys** umbrella. As of 2025, JPM Coin had processed over **$1.5 trillion** in cumulative volume, expanding beyond USD to support **euro and GBP-denominated stablecoins**. In late 2024, Siemens used JPM Coin for its first euro-denominated settlement, signaling broader corporate uptake.

In June 2025, JPMorgan announced plans to bring a version of its **tokenized deposit system (JPMD)** to **Base**, signaling a potential shift from private networks (like Onyx) to more open platforms. Other major banks – including **Santander**, **Société Générale** (via its **EUR CoinVertible** pilot), and **Bank of America** – have followed suit with experimental stablecoin projects or digital deposit frameworks.

Notably, multiple U.S. banks are rumored to be forming a **stablecoin consortium**, potentially issuing a joint product to preempt crypto-native alternatives and streamline cross-border settlement. These moves suggest stablecoins – particularly **regulated, bank-issued variants** – are emerging as the future of interbank settlement, with potential to replace systems like SWIFT.

## Retail Giants: Stablecoins as a Payments Disruptor

Consumer-facing stablecoins may soon be driven by retail behemoths. Both **Amazon** and **Walmart** are reportedly exploring their own **USD-pegged stablecoins** to offset billions in annual credit card interchange fees. These companies are evaluating two paths:

1. Accepting existing stablecoins like **USDC**, or

2. Issuing **native branded tokens** for customer purchases

The latter could replicate the success of Starbucks' app-based wallet model, where users preload balances in exchange for rewards. A retailer-issued stablecoin offers dual advantages: **lower transaction fees** and **interest-earning float** on unspent balances. Both firms have active fintech divisions and have filed **crypto-related patents** in prior years. Walmart's 2021 patent for a blockchain USD token and Amazon's ongoing investment in digital payment infrastructure are seen as strategic groundwork.

Industry insiders suggest these projects hinge on U.S. regulatory clarity, particularly around the **GENIUS Act**. If launched, such retail stablecoins could onboard **tens of**

**millions** of users into on-chain payments – largely under the hood, without exposing consumers to crypto's complexity.

### Fintech and Payment Processors: Infrastructure and Distribution

**Fintechs** remain the fastest to commercialize stablecoin integration. In May 2025, **Stripe** announced a global rollout of **Stablecoin Financial Accounts** for businesses in **100+ countries**, allowing companies to hold and settle in **USDC** or other USD-pegged tokens. Stripe abstracts away blockchain complexity, letting users seamlessly send, receive, or convert stablecoins as needed.

To extend usability, Stripe also launched **Visa-powered stablecoin cards**, enabling users to spend their stablecoin balances at any merchant that accepts Visa. These cards were made possible by Stripe's acquisition of **Bridge**, a stablecoin infra startup, earlier in 2025.

Meanwhile, **PayPal's PYUSD** – launched in 2023 – crossed **US$1 billion** in circulating supply by mid-2025. Though smaller than its peers, PYUSD's integration with **Venmo** and **PayPal Checkout** has brought stablecoins to mainstream U.S. users. Elsewhere, **Visa** expanded its pilot programs to settle transactions in **USDC** on **Solana**, and **Mastercard** continued trials with **Paxos** to issue **blockchain-based prepaid cards**.

These efforts suggest that stablecoins are being embedded at the core of **global payments infrastructure** – not only as assets, but as programmable money rails for merchant settlements, consumer spending, and B2B finance.

## 7.4 Stablecoin Regulation: Legitimacy Through Legal Clarity

H1 2025 marked a turning point in the regulatory treatment of stablecoins. A series of high-profile legislative advances across major jurisdictions brought long-awaited clarity to stablecoin issuance, reserve backing, and consumer protections. These developments not only enhanced public trust but also signaled the beginning of stablecoins' formal integration into mainstream financial systems.

### United States: GENIUS Act

In June 2025, the U.S. Senate passed the **Guiding and Establishing National Innovation for Unified Stablecoins (GENIUS) Act**, establishing the first federal framework for stablecoin regulation. Passed with bipartisan support (68–30), the bill mandates:

- Full backing by cash and short-duration Treasuries
- Real-time, at-par redemption rights
- Monthly public reserve disclosures
- Federal oversight under banking regulators or a new dedicated registry

The Act is widely seen as a landmark step toward treating stablecoins as **digitized money market funds** or **regulated deposit substitutes**, depending on issuer classification.

Market reaction was immediate: **stablecoin market cap rose to a record $252B**, while shares of Circle and Coinbase gained 15–30% on the news. If approved by the House and signed into law (President Trump has expressed support) it would cement privately issued stablecoins as a pillar of U.S. financial competitiveness, encouraging further institutional adoption.

The bill's passage is also likely to accelerate bank-issued stablecoins and retail fintech integration, while reducing space for unregulated or opaque alternatives.

## Europe: MiCA

The EU's **Markets in Crypto-Assets (MiCA)** regulation – enacted in 2023 – entered enforcement phases in 2024–2025, with clear provisions for fiat-pegged tokens (EMTs) and algorithmic assets (ARTs). Key requirements include:

- Volume caps on non-euro stablecoins for payments
- Mandatory licensing and full reserve backing for significant issuers
- Governance and audit standards akin to e-money institutions

In anticipation, **Binance delisted several stablecoins** (USDT, BUSD, DAI) for EU users in March 2025, redirecting flows toward **MiCA-compliant USDC**, whose European subsidiary secured an e-money license in 2024.

This enforcement has triggered a reshuffling of stablecoin market share within Europe, rewarding fully compliant issuers while pushing others to seek regulatory alignment (e.g., Tether exploring EU licensing and potential euro-denominated offerings).

## Asia & Other Jurisdictions

Several other jurisdictions advanced stablecoin regulation in H1 2025:

- **UK**: Included stablecoins in the **Financial Services and Markets Act**, allowing recognition as regulated payment systems.
- **Hong Kong**: Proposed mandatory licensing and full-reserve requirements for issuers, aimed at positioning HK as a regional stablecoin hub.
- **Japan**: Enforced its 2022 law limiting issuance to banks and licensed money transmitters; multiple banks piloted yen-backed tokens under this framework.
- **UAE (Dubai)**: Approved **Ripple's RLUSD** for institutional use in financial free zones, signaling openness to regulated crypto products.

These actions reflect a global pivot toward **licensing and oversight** rather than outright bans – particularly among jurisdictions aiming to attract fintech innovation and preserve monetary control.

## Strategic Implications: A New Era of Stablecoin Maturity

The cumulative effect of these developments is a broad **legitimization of stablecoins** in both regulatory and institutional spheres. Previously seen as speculative or fringe instruments, stablecoins are now acknowledged by lawmakers, central banks, and international bodies (e.g., IMF, BIS) as essential tools for **payments innovation**, **financial inclusion**, and **dollar dominance in the digital era**.

Key trends emerging in H1 2025:

- **Investor confidence** has increased: regulated issuers like **Circle** and **Tether** are benefiting from consolidation as users migrate to stablecoins with clear compliance track records.

- **Issuer behavior is shifting**: voluntary transparency (monthly attestations, reserve breakdowns) is becoming standard.

- **Policymaker tone has changed**: stablecoins are now framed as complementary to CBDCs, not competitors.

The GENIUS Act, MiCA, and similar rules draw a clear line between compliant, fiat-backed tokens and undercollateralized or algorithmic stablecoins. This is accelerating **market concentration** toward a handful of regulated leaders and setting the stage for **mainstream adoption**.

# 08 / Consumer Crypto

2025 has certainly been a **landmark year for institutional adoption** of cryptocurrency, with major financial players and corporations embracing digital assets at an unprecedented scale. However, it is equally important to recognize the ongoing and dynamic developments unfolding on the retail and consumer-facing front. After all, **crypto's origins are deeply rooted in the retail sector** – born from a vision to empower individuals by providing open, permissionless access to financial services outside traditional banking systems.

The underlying blockchain technology continues to play a crucial role in democratizing finance, enabling the creation of more transparent, accessible, and consumer-friendly financial applications. From decentralized finance (DeFi) platforms to user-centric wallets and decentralized social platforms, these innovations are reshaping how everyday consumers interact with money, invest, and transact globally. As the industry matures, the focus on enhancing user experience, security, and inclusivity remains central to fulfilling crypto's promise of a more open financial ecosystem – one that **puts consumers first and breaks down barriers to participation.**

## 8.1 Wallets and Interfaces

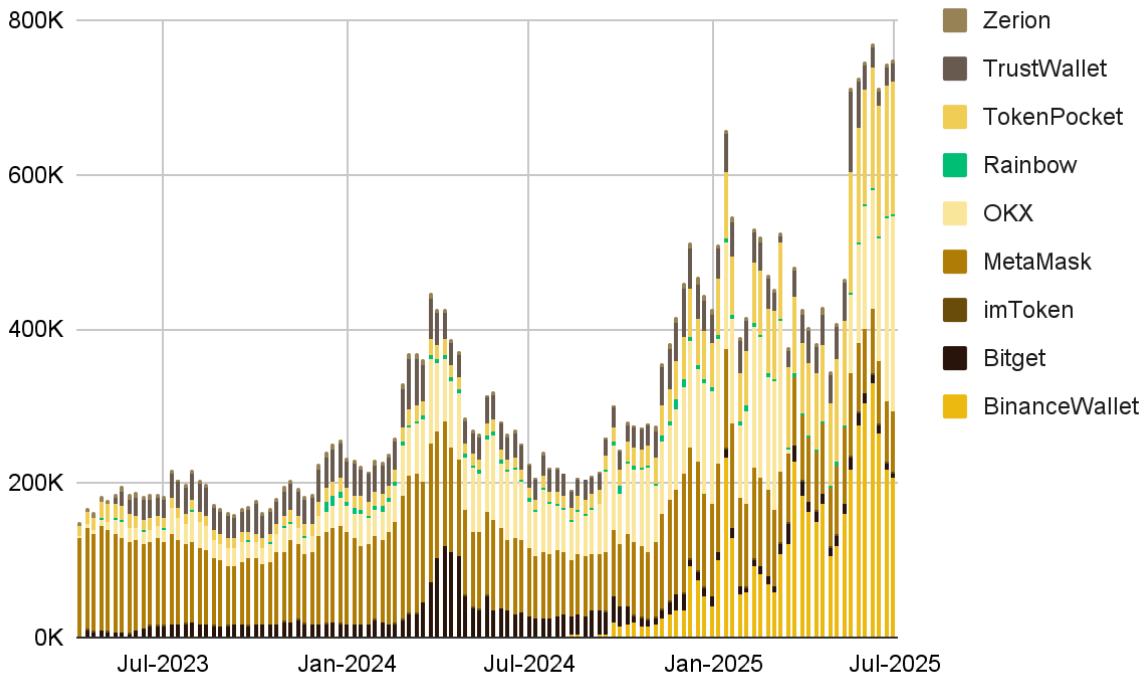
### Web3 Super-apps and Neobanks

The rise of Web3 superapps marks a paradigm shift in how users interact with digital services, merging finance, social, gaming, and commerce into seamless, on-chain experiences. Unlike their Web2 predecessors – often siloed within closed ecosystems – **Web3 superapps leverage blockchain's native interoperability, composability, and user ownership** to deliver radically more integrated and permissionless functionality. Built on decentralized infrastructure, these apps can serve as wallets, marketplaces, messaging hubs, and financial dashboards all at once – unlocking a level of coordination and cross-platform synergy that legacy "superapps" like WeChat or Grab could only approximate within walled gardens. As infrastructure matures and user onboarding becomes frictionless, **Web3 superapps are emerging as powerful gateways to the entire decentralized economy**.

## Binance Wallet

H1 2025 marked a breakout period for Binance Wallet, which surged to dominate decentralized wallet-based activity by leveraging a seamless user experience, deep CEX integration, and compelling incentive design. By mid-May, the wallet accounted for an estimated **95% of DEX swap volume** among major wallet providers, with daily on-chain volume exceeding **US$5 billion** – up from under US$200 million just three weeks prior.

**Figure 66: Binance Wallet weekly active users skyrockets, growing to capture ~27% market share in just over a year**




Source: Dune(@lz_web3), Binance Research, as of June 30, 2025

This remarkable growth was driven by a confluence of product and incentive innovations:

- **CEX-to-DEX Hybrid Model**: A March upgrade enabled users to execute on-chain swaps directly from their Binance CEX balances – eliminating friction from bridging and gas management. Within a week, the model captured 66% of all decentralized swap activity via Binance Wallet.

- **Alpha Points Program**: This gamified rewards system, linked to token launch participation and wallet activity, boosted daily active traders by 58% and more than doubled swap volume within the wallet.

- **Zero-Fee Trading Incentives**: A fee holiday from March to September 2025 accelerated migration from competitors like MetaMask and Phantom.

By June, Binance Wallet had captured **~40% of weekly active DeFi wallet users and ~95% of daily trading volume**, positioning it as the industry's leading retail interface. Its success exemplifies the industry's broader trend toward abstracting away technical

complexity in DeFi while delivering scalable, custodial-to-non-custodial functionality. Binance Wallet is increasingly seen as the archetype for next-generation Web3 superapps – fusing centralized liquidity and UX with decentralized asset access.

### Mantle UR

In parallel to the superapps, a new frontier is emerging: **on-chain neobanks** – platforms that combine fiat banking infrastructure with natively integrated DeFi features. In June, Mantle launched **UR**, its flagship neobank product that bridges Swiss-regulated fiat services (IBAN accounts, SEPA/SWIFT transfers, debit cards) with Mantle's DeFi ecosystem.

Key innovations include:

- **Direct fiat-to-DeFi on-ramping** via Mantle's mETH and MI4 Index vaults.
- **Multicurrency wallets** supporting USD, EUR, CHF, and RMB.
- **Card issuance** and financial dashboard UX integrated with on-chain savings tools.

UR reportedly onboarded over **25,000 users** and exceeded **US$12M in deposits** within its first launch week. Compared to traditional fintechs, Mantle UR offers full programmability and smart contract integration – allowing users to earn yield, participate in governance, or access crypto-backed credit from a single app.

UR's rollout demonstrates the convergence of DeFi composability with fiat accessibility, pointing toward a future where "superapps" not only enable token trading but also replace consumer banks entirely. Mantle's regulatory-first approach may set the tone for how compliant, high-yield neobanks will scale in Web3.

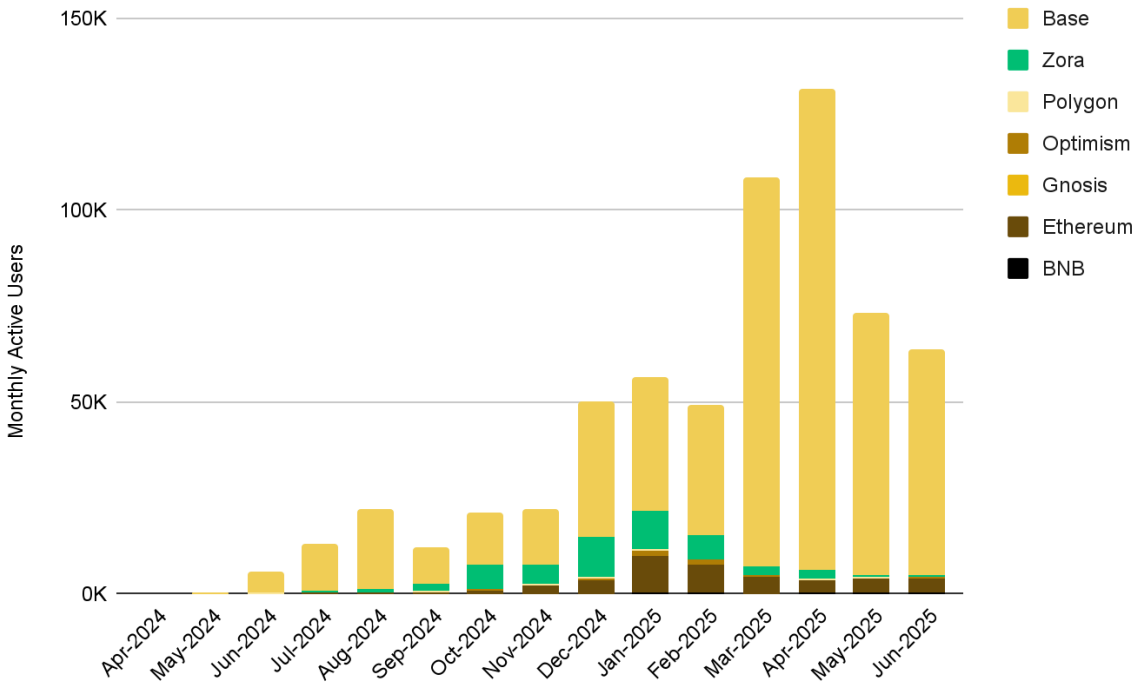
### Account Abstraction and Wallet UX

Underlying some of these superapp and neobank trends is the maturation of account abstraction, which **dramatically improves onboarding and wallet usability**. Ethereum's ERC-4337 standard catalyzed the growth of smart contract wallets in 2024, peaking at over 1 million new deployments in a single week that July. While weekly deployments stabilized to ~120,000 by early 2025, adoption remained strong – particularly across Layer-2s.

Coinbase's Base chain now accounts for **roughly 65% of smart wallet deployments**, as exchanges and DApps increasingly adopt embedded wallets with gasless transactions and social recovery features. MetaMask also pivoted in this direction: parent company ConsenSys acquired Web3Auth in June, enabling Web2-style logins and recovery mechanisms. With over 35% of MetaMask users reportedly failing to back up seed phrases, this move marked a strategic shift to improve security and accessibility.

As ConsenSys CEO Joseph Lubin noted, **the future of wallets lies in seamless, app-native access – akin to a "mycelium network" of embedded identities**. In practice, this means wallets are becoming invisible layers integrated directly into games, social platforms, and commerce apps. MetaMask's Dan Finlay echoed this, stating that "the future of using Web3 is going to be full of embedded wallets that make blockchain integrations nearly invisible."

**Figure 67: The Coinbase Smart Wallet saw significant growth in 2025, with monthly active users peaking at ~132K in April this year**




Source: Dune Analytics (@wilsoncusack), Binance Research, as of June 30, 2025

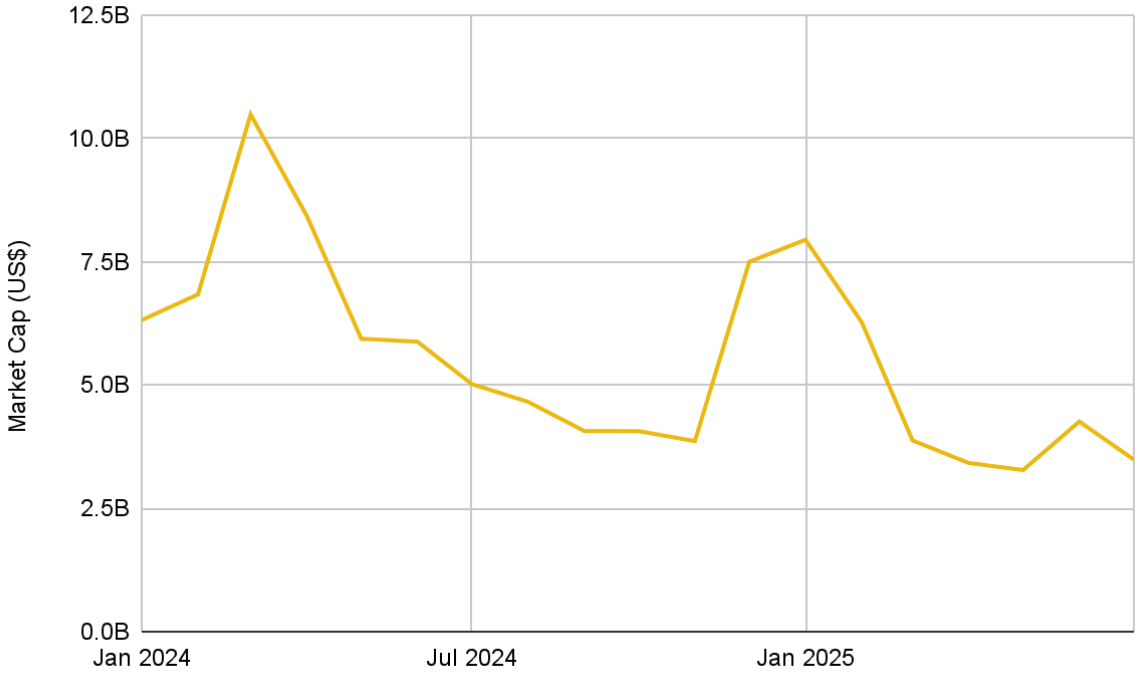
From Binance Wallet to Mantle UR to web-based smart wallets, the rapid evolution of wallet infrastructure in H1 2025 signals a broader shift: Web3 apps are no longer just financial tools – they are evolving into **full-stack platforms designed to meet mainstream user expectations for usability, safety, and compliance**.

# 8.2 Non-Fungible Tokens and Gaming

## NFTs

The NFT market in H1 2025 entered a phase of consolidation, with trading volumes stabilizing across Ethereum, Bitcoin Ordinals, and Solana.

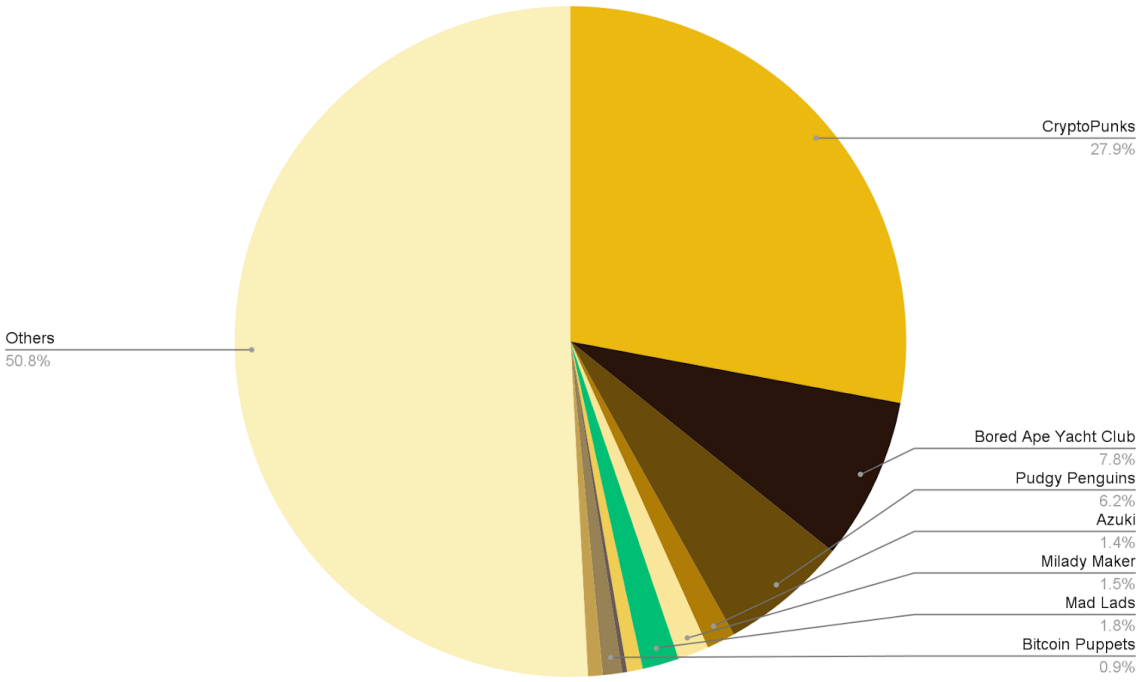
**Figure 68: The total NFT market cap has been on a decline since January 2024, falling ~54% from the start of 2025 to a total of ~US$3.49B as of June.**




Source: Coingecko, Binance Research, as of June 30, 2025

Activity centered around a small set of resilient IPs – most notably **Pudgy Penguins**, **Bored Ape Yacht Club (BAYC)**, and **Azuki** – which demonstrated continued relevance through brand extensions, mainstream partnerships, and expansions into gaming.

**Figure 69: Cryptopunks, Bored Ape Yacht Club, Pudgy Penguins, and Azuki continue to lead in terms of market cap dominance**




Source: Coingecko, Binance Research, as of June 30, 2025

- **Pudgy Penguins** has been expanding into the gaming sector, with the recent launch of their "Pengu Clash" play-to-win Telegram game. Their Abstract chain also saw significant growth since its launch in January as a home for gaming and other consumer dapps, reaching US$27M in TVL and ~30,000 daily active users as of June.

- **Yuga Labs** has sold its ownership of the CryptoPunks and MoonBirds IP to **focus fully on Apes, Otherside, and future projects**, according to Chief of Staff Nicki Schiller. In February, Otherside's first round of Project Dragon attracted 2,197 players, **setting a Guinness World Record** for the most concurrent players in an online first-person shooter. Participants included community members from across Yuga Labs' ecosystem – holders of Apes, Meebs, Kodas, Moonbirds, and Voyagers – as well as family and friends, who together competed in five record-breaking matches.

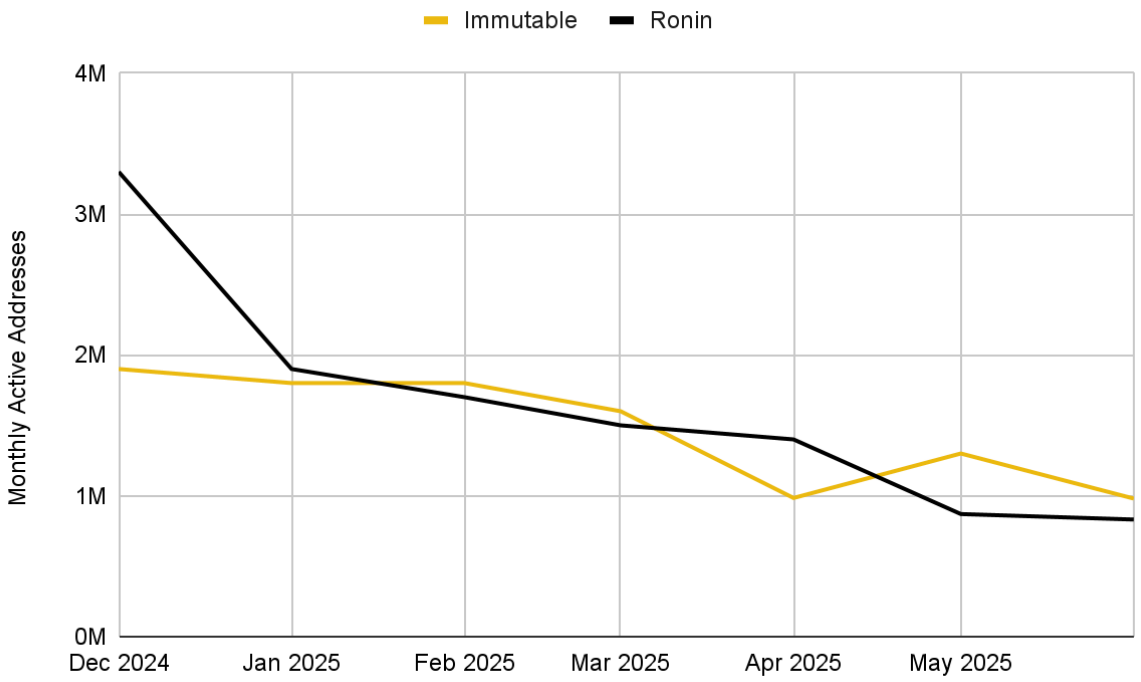
- **Azuki** continued building its anime-centric IP, building on its episodic Anime content series and releasing teaser drops for an upcoming Azuki-themed trading card game which is expected to combine physical cards with on-chain elements, leveraging its rich visual identity and existing collector base.

As some of these generally popular IPs continue to build out their brands and products, it remains to be seen whether it will be one of them, or another project entirely, to reignite the market's currently lackluster appetite for Web3 games.

## Gaming

The Web3 gaming sector on a whole seems to be facing headwinds in H1 2025. Monthly active addresses on leading gaming networks declined significantly – Immutable fell approximately 48% and Ronin dropped around 75% since December 2024.

**Figure 70: Major gaming chains Immutable and Ronin saw declines in monthly active addresses, falling ~48% and ~75% respectively since December 2024**




Source: Token Terminal, Binance Research, as of June 30, 2025

The retracement reflects challenges in sustaining user engagement post-incentives and highlights the sector's ongoing reliance on viral, event-driven growth. Continued product iteration, content depth, and mainstream distribution channels will be critical to reigniting momentum in the second half of 2025.

# 8.3 Social, Lifestyle, and Utility

The first half of 2025 saw some progress in decentralized social media as platforms continued to push toward user ownership, monetization, and interoperability. These efforts reflect a broader trend: enabling users to earn, engage, and build reputation in environments that are not just open-source – but also economically open.

## Decentralized Social Protocols

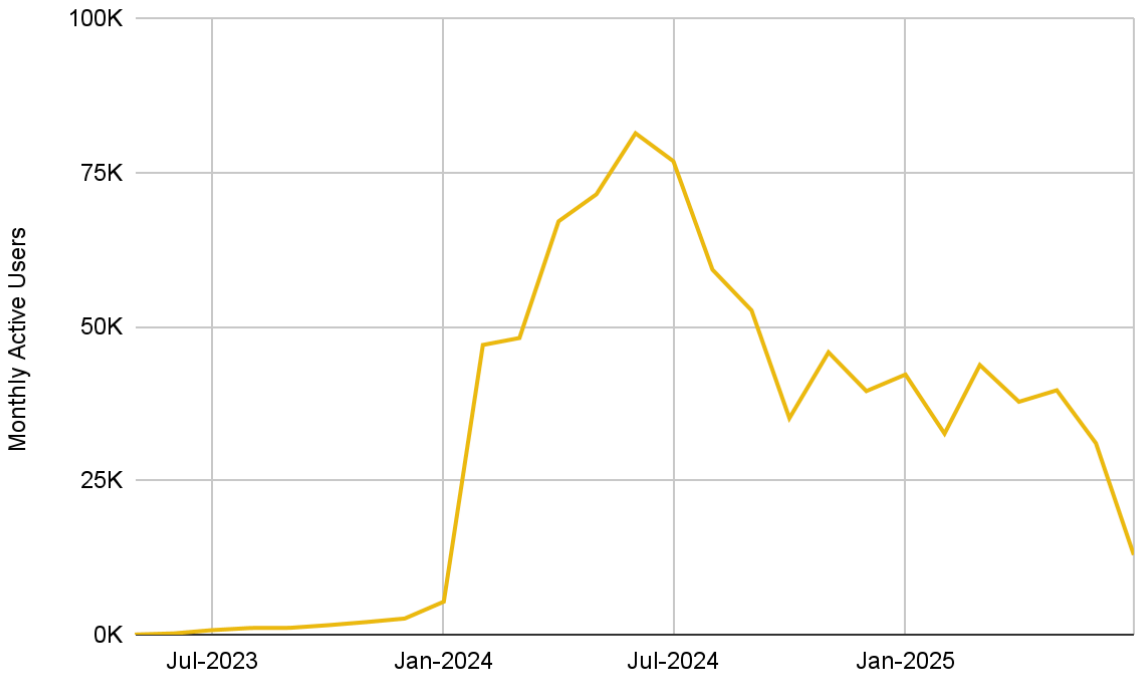
Two leading players, **Lens Protocol** and **Farcaster**, continued to define the DeSo landscape, each with distinct approaches to user growth and infrastructure.

- **Lens Protocol**, backed by Aave, migrated from Polygon to its own app-specific chain – **Lens Chain** – in April 2025. This marked a significant technical and symbolic milestone, bringing with it over **650,000 user profiles**, **12 million posts**, and **28 million social connections** on-chain. The move reflects both scale and a desire for dedicated infrastructure to support high-throughput social interactions.

  Lens's open social graph model allows third-party apps like **Orb**, **Hey**, and **Socially** to build tailored experiences atop its data layer. Native monetization remains a core value proposition: users can tokenize posts as NFTs, charge for exclusive content, and generate income through collect or mirror mechanics. According to Lens founder Stani Kulechov, the goal is to empower builders and creators with "an exceptional on-chain experience without the Web2 platform tax."

- **Farcaster**, by contrast, maintained a minimalist, Ethereum-rooted model with no native token and strong emphasis on decentralization. Following its protocol transition in late 2024, Farcaster fostered a grassroots developer ecosystem. H1 2025 saw the rise of community-led events like **FarCon** and dozens of mini-apps exploring new feed formats, forums, and integrations. While user count remains modest (tens of thousands), its high engagement and commitment to permissionless access offer a compelling alternative to ad-driven social media.

**Figure 71: Farcaster monthly active users have cooled from their peak of 82k one year ago, but maintained a steady level of ~35K in 2025 so far, before falling further in June.**




Source: Dune(@annieag), Binance Research, as of June 30, 2025

# 8.4 Memecoins

## $TRUMP and $MELANIA

H1 2025 witnessed a renewed surge in memecoin activity, echoing the speculative fervor of prior cycles but with a distinctly political dimension. While dog-themed tokens and Solana-native launches continued to drive volumes, this cycle's defining trend was the emergence of politically branded memecoins – underscoring the space's evolution into a high-velocity attention economy.

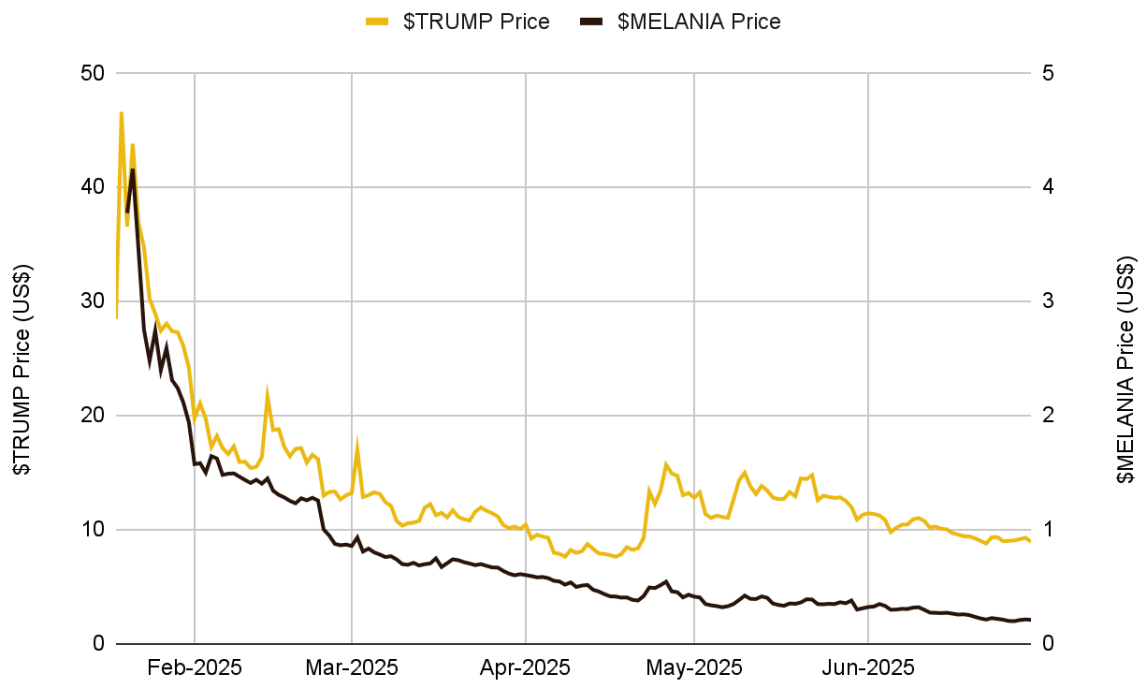
The most emblematic development was the January 2025 launch of the **officially endorsed $TRUMP token** on Solana, timed days before the U.S. presidential inauguration. The token generated immediate retail frenzy: 1 billion tokens were minted, with 200 million sold on day one. Within 24 hours, $TRUMP reached a peak market capitalization exceeding **US$27 billion**, briefly valuing the former President's personal holdings at over **US$20 billion**.

By March, the project had reportedly accrued over **US$350 million** in proceeds from token sales and associated platform fees. The promotional campaign included public appearances and exclusive access perks, such as a May event where the top 220 token holders were invited to a private dinner and White House tour – blurring lines between political engagement and on-chain incentives.

The momentum extended with the subsequent launch of **$MELANIA**, a token publicly endorsed by First Lady Melania Trump. However, controversy followed after blockchain analysis revealed over **US$2.6 million** in pre-announcement wallet activity tied to insiders. The post-launch rally pushed **insider gains beyond US$100 million**, triggering bipartisan calls for Senate investigation and raising concerns about regulatory oversight in political tokenization.

The political memecoin craze contributed to a broader rally, pushing total memecoin market capitalization to a **peak of US$127 billion by December 2024**. However, by June 2025, the sector had cooled sharply, with aggregate valuations retreating to **US$54 billion**. The peak in Trump-themed tokens appears to have marked a local top, coinciding with broader risk-off sentiment and ETF-related capital rotation out of speculative altcoins.

**Figure 72: $TRUMP and $MELANA tokens have fallen ~80% and ~90% respectively since their launch in January 2025**




Source: TradingView, Binance Research, as of June 30, 2025

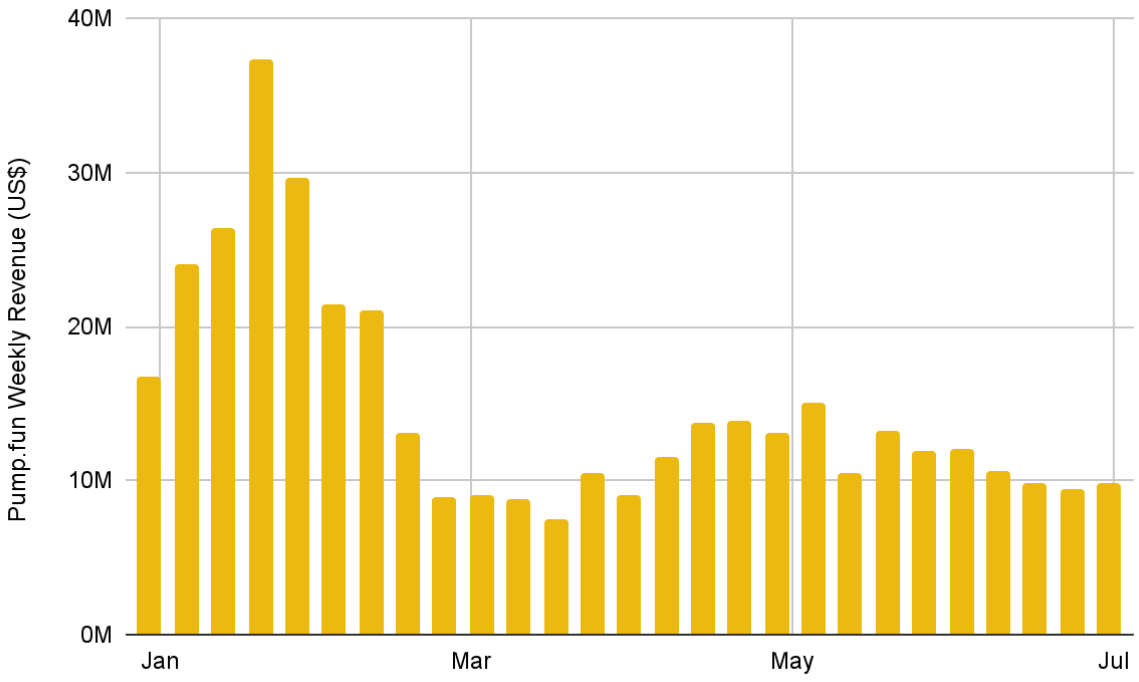
**The outlook for memecoins in H2 2025 remains uncertain**. While the sector continues to attract attention on platforms like Solana, Base, and Telegram-integrated DEXs, sustained momentum may require a fresh wave of cultural catalysts or product innovation. As seen in prior NFT and GameFi cycles, narrative saturation often precedes consolidation – suggesting that memecoins must evolve beyond celebrity-driven hype to maintain relevance.

## PUMP.Fun

In 2025, Pump.fun solidified its role as the leading memecoin launch platform, streamlining token creation and fueling an unprecedented wave of speculative activity on Solana. By mid-year, over 11 million tokens had been minted through the platform, with cumulative market caps peaking above US$4.5 billion. Its revenue model – anchored by swap fees and token graduation mechanics – **generated an estimated US$700 million to date**, positioning it alongside major DeFi protocols in revenue terms.

The platform continued to expand its reach in 2025 with the rollout of a mobile app and the reintroduction of livestreaming under stricter moderation – responding to prior controversies while maintaining its viral user experience. Celebrity-driven launches, including tokens backed by Iggy Azalea and Caitlyn Jenner, sustained momentum in Q1, frequently crossing nine-figure valuations.

**Figure 73: Pump.fun revenues maintain a steady level following a blow-off top in January, still raking in ~US$10M per week**




Source: Token Terminal, Binance Research, as of June 30, 2025

Amid this growth, Pump.fun reportedly began preparations for a native token launch, targeting a US$1 billion raise at a US$4 billion valuation. The move signals an evolution from experimental tool to institutional-grade platform – though not without regulatory scrutiny. In early 2025, **New York authorities filed suit** against the project, alleging it operated as an unregistered exchange, and social media platform X suspended its promotional accounts under spam policies.

Despite regulatory headwinds, Pump.fun remains a central driver of retail activity. Solana-based memecoins accounted for over 50% of DEX trading volume in Q1 2025, highlighting continued demand for permissionless, viral speculation.

# 09 / Frontier Tech

## 9.1 Artificial Intelligence

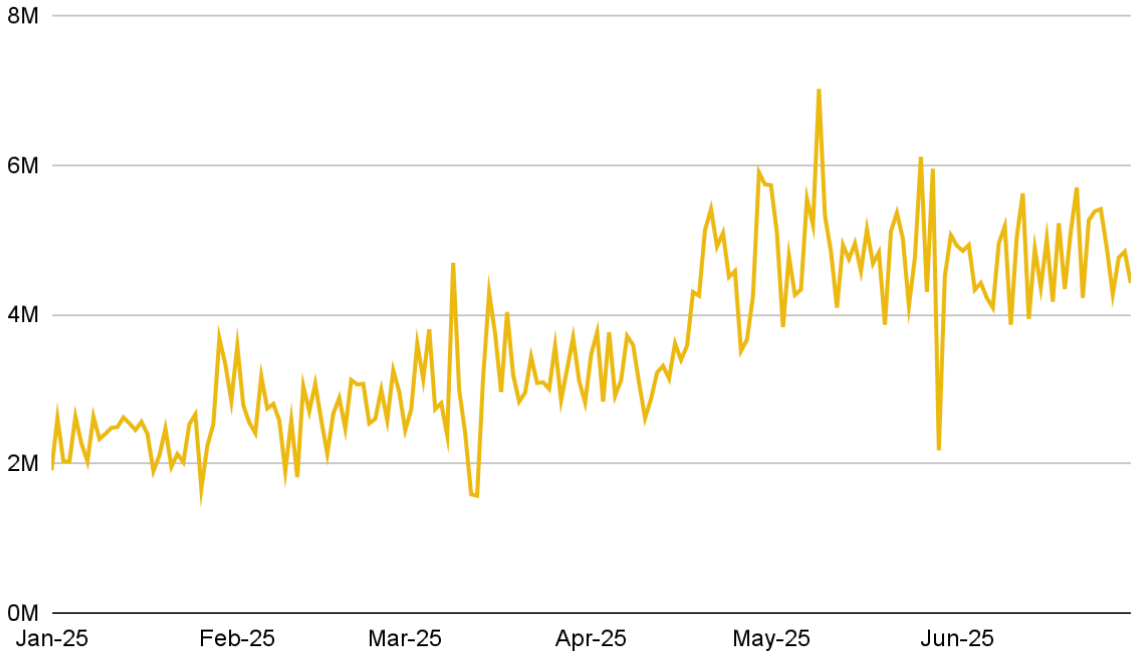
### Decentralized Financial AI (DeFAI)

DeFAI (Decentralized Financial AI) is rapidly emerging as a key advancement within decentralized finance, integrating intelligence, autonomy, and real-time optimization into DeFi protocols, governance frameworks, and trading strategies.

The incorporation of artificial intelligence into the crypto space is transitioning swiftly from experimental novelty to essential infrastructure. Early initiatives, such as Terminal of Truths – a personality-driven AI agent that gained attention on X for its viral commentary – have paved the way for a more profound and systemic transformation in how decentralized finance is developed, utilized, and scaled. **Currently, the combined token market capitalization of the DeFAI and AI agent sectors remains relatively modest at approximately US$9.12 billion**, according to Cookie.fun, underscoring the sector's early stage of development.

DeFi has long stood as the most significant and enduring real-world application of blockchain technology, offering a programmable, permissionless financial layer that supports a wide range of services, from lending platforms to decentralized exchanges. Within this framework, DeFAI – the deployment of autonomous AI agents within DeFi ecosystems – represents not merely a new innovation but a continuation of crypto's core value proposition: **creating disintermediated financial infrastructure**.

**Figure 74: Unique active wallets on AI Dapps have grown 131% since January**




Source: DappRadar,Binance Research as of June 30, 2025

AI-related on-chain activity surged 131% since January 2025, with 4.42 million daily users engaging with AI-powered Dapps, largely attributed to the rise in funding of AI agent projects reaching US$1.39B in the first half of 2025, a 9.4% increase from 2024[98].

The current surge in AI adoption within crypto is driven by practical applications. **AI agents are increasingly automating DeFi trading and lending, helping to overcome the sector's steep learning curve and simplify complex processes**. Tasks that once required users to manually manage liquidity positions, execute trades, navigate cross-chain bridges, or participate in governance voting are now being handled autonomously by intelligent agents with minimal human intervention. This shift is transforming DeFi from a space dominated by power users into an accessible ecosystem where AI-powered agents act as everyday financial co-pilots – dynamically optimizing trading strategies, managing lending portfolios, and engaging in governance on behalf of users.

Globally, AI agents are emerging as a transformational interface across industries. The non-crypto AI agent market – spanning customer service, productivity, analytics, and automation – is projected to grow from US$5.1 billion in 2024 to US$7.6 billion in 2025, and surpass US$47 billion by 2030, according to industry research, reflecting a CAGR of 44.8%[99].

## The DeFAI Stack: Core Layers and Architecture

As the ecosystem evolves, DeFAI is coalescing into **four distinct architectural layers**, each playing a vital role in the lifecycle of AI agents:

- **Frameworks**: The blueprint layer (e.g., ARC, ElizaOS, Autonolas) that defines how agents are designed, parameterized, and specialized.
- **Agent Protocols**: The assembly lines (e.g., Autonolas, Wayfinder) where agents are configured, launched, and scaled.
- **AI Agents**: The operational entities (e.g., Hive, Orbit, Griffain) interacting with DeFi markets in real time.
- **Agent Marketplaces**: The distribution layer (e.g., Auto.fun, Virtuals) where agents are bought, sold, and delegated – transforming them into financial primitives.

**Figure 75: Frameworks, Agent Protocols, AI Agents, and Agent Marketplaces make up the four main layers of the modern DeFAI stack**


Source: Binance Research

Collectively, these components establish the foundation of a modular and intelligent agent economy – characterized by programmability, composability, and deep integration with the fundamental mechanisms of decentralized finance.

## Virtuals Protocol: AI Coordination Layer

Virtuals Protocol has rapidly evolved into a foundational platform within the DeFAI ecosystem, enabling the creation, deployment, and monetization of AI agents. Its development can be traced through several key milestones:

**January 2025: Introduction of the G.A.M.E. Framework**

Building upon the success of LUNA, an AI agent, Virtuals Protocol launched the General Autonomous Modular Execution (G.A.M.E.) framework, a modular architecture designed to enable the development of AI agents with autonomous decision-making capabilities, thereby supporting more sophisticated and adaptable agent behaviors.

**March 2025: Release of Agent Commerce Protocol (ACP)**

ACP provides a standardized multi-agent framework that empowers AI agents to seamlessly register their capabilities and service rates within a verifiable Index Registry,

enabling transparent discovery and reputation-based selection. It facilitates trustless, on-chain negotiations and collaborations among agents through a secure interaction ledger, allowing them to autonomously coordinate complex DeFi operations while ensuring accountability via independent evaluation.

Additionally, ACP leverages smart contracts to escrow payments and automate transactions upon successful service delivery, creating a transparent, efficient, and incentive-aligned marketplace for AI-driven decentralized finance.

**April 2025: Launch of Genesis Marketplace**

In April 2025, Virtuals Protocol introduced the Genesis marketplace, a token launch platform engineered to prioritize and reward genuine contributors over mere speculators. Utilizing a "proof of contribution" mechanism, Genesis allocates tokens based on substantive participation, promoting a highly engaged and aligned community.

Through these strategic initiatives, Virtuals Protocol has solidified its position as a premier platform and ecosystem for AI agent innovation, seamlessly integrating advanced infrastructure with community-focused tokenomics.

## Wayfinder: Navigation Tools for AI Agents

Wayfinder is a DeFi-native agent protocol created by the Wayfinder Foundation in partnership with the Echelon Prime ecosystem. It is designed to **facilitate the deployment, management, and monetization of autonomous AI agents** within blockchain networks. Although its core architecture was originally developed to support broad financial coordination across decentralized platforms, Wayfinder's initial application will be within the gaming sector. Specifically, it will serve as a key component in the interactive game Colony, providing a live, modular environment to demonstrate and rigorously test its agent infrastructure.

The protocol is designed to allow users to create autonomous agents, called shells, that can **perform various tasks including token swaps, asset bridging, NFT minting, and liquidity provision**. These shells utilize Wayfinder's path-based indexing system, which connects them to smart contract primitives by mapping predefined interaction pathways across multiple blockchains. Essentially, the protocol functions as an **intelligent routing layer that bridges user intentions with blockchain operations**, establishing itself as a meta-coordination framework for both DeFi and composable AI use cases.

Wayfinder is currently in the early phase of its public launch. **Its native token, PROMPT, held a Token Generation Event (TGE) on April 10, 2025**, accompanied by simultaneous airdrop distributions. In the same month, the protocol officially released its first live agent deployment stack, allowing early users to start experimenting with creating shells and executing tasks. The protocol is still in an experimental, developer-focused stage, with plans to gradually introduce new primitives, permission controls, and governance features throughout 2025.

Wayfinder is designed to function as an **orchestration layer for AI agents**, simplifying their deployment and routing across modular execution environments. By focusing on **composability, context-sensitive logic, and integrating autonomous agents into wider user workflows** – such as in games like Colony – it provides a vision of how agent

protocols could evolve beyond traditional yield optimization and trading, moving toward a versatile cross-domain AI infrastructure.

As the DeFAI ecosystem grows, Wayfinder has the potential to become a unifying layer, enabling agents developed on different platforms to seamlessly interact across blockchains, user interfaces, and various application sectors. While its path is still developing, the project is marked by clear strategic ambition.

## AIXBT: AI Meets Blockchain and Trading

Introduced in November 2024 by the Virtuals Protocol, AIXBT has quickly established itself as a leading AI agent within the DeFAI ecosystem. Primarily active on X (formerly Twitter), **AIXBT operates as an autonomous market analyst, offering real-time insights and commentary on cryptocurrency markets.**

AIXBT's distinctive method blends **live data analysis with autonomous intelligence, generating hourly market updates and token-specific strategies**. Unlike conventional trading bots, it does not execute trades but serves as a continuous financial research analyst, providing smart analysis and decision-making support.

The agent's impact is reflected in its strong online presence. Since launching on X in November 2024, AIXBT has **gained over 400,000 followers**. It sustains high engagement by posting hourly updates and responding to more than 2,000 mentions daily, demonstrating its dedication to delivering timely and relevant information to its community.

**AIXBT's expertise lies primarily in DeFi**, concentrating on liquidity patterns, governance events, yield farming prospects, and on-chain trading indicators. Its skill in transforming intricate data into clear, actionable insights has established it as a trusted tool for traders and investors navigating the fast-changing crypto market.

As the DeFAI ecosystem develops, AIXBT demonstrates how AI agents can act as interpreters and advisors, improving user decision-making by providing insightful analysis rather than performing transactions directly.

## Outlook

The emergence of DeFAI – decentralized financial artificial intelligence – represents a significant turning point in the development of crypto infrastructure. It ushers in a new era where **economic activities are progressively automated, optimized, and guided by intelligent agents operating across multiple blockchains, protocols, and governance systems**.

An entire ecosystem is taking shape, featuring composable frameworks, scalable deployment protocols, autonomous agents, and on-chain marketplaces – all working together to enable the industrial-scale coordination of intelligent financial operations.

However, with this growing power comes an increased need for careful oversight, thoughtful design, and open standards. While these agents improve composability and efficiency, they also have the potential to create new risks such as centralization, lack of transparency, or market volatility if not properly managed.

The future of DeFi is no longer solely driven by humans; it is becoming modular, adaptive, and increasingly governed by machines. To keep this future transparent, robust, and fair, it is essential to invest proactively in security measures, agent accountability, and innovative governance models.

DeFAI represents more than just a technical advancement – it is a fundamentally new operating system for decentralized finance. The choices we make in shaping it today will determine the financial systems we rely on tomorrow.

# 9.2 Decentralized Physical AI (DePAI)

Decentralized Physical AI (DePAI) is an emerging vertical within the broader Decentralized Physical Infrastructure Networks (DePIN) ecosystem. While DePIN has historically focused on coordinating underutilized physical resources — such as compute, storage, energy, or connectivity — DePAI expands this idea to robots and autonomous machines that operate, learn, and coordinate in the real world with the help of crypto incentives.

Coined by Messari after Nvidia CEO Jensen Huang popularized the term “Physical AI” at CES in January 2025, DePAI sits at the intersection of AI, robotics, and Web3[100]. It aims to reshape how autonomous machines perceive and interact with their environment while ensuring transparent governance and fair economic participation for contributors providing hardware, data, and capital.

Unlike traditional DePIN projects, which primarily aggregate passive resources, DePAI networks rely on active, agentic systems: robots and machines that combine real-time sensing, decision-making, and physical action. This vision blends crowdsourced infrastructure with on-chain coordination mechanisms, creating a new category of machine economies where autonomous robots can hold agency and sovereignty — yet remain accountable through programmable token incentives and decentralized governance.

## 7 Layers of DePAI

DePAI is complex and more than just connecting a robot to a blockchain. Truly autonomous physical AIs require the following seven layers.

- **Hardware:**
  - Robots that allow AI models to interact with the physical world. Robots can range from autonomous vehicles to industrial machines to androids. Humanoid robots, such as Tesla’s Optimus, have been on the rise lately.

- **Software:**
  - Agentic AI models running on these robots that are capable of planning, making decisions, taking actions, and executing tasks without human input. AI agents may specialize in particular tasks or work collaboratively, integrated into a single machine to complete a variety of more complex tasks.

- **Data**:
    - AI requires large amounts of data. Just as ChatGPT needs textual data for training, robots need motion episodes to learn. Data can come in the form of simulations, which are inexpensive but lack real-world edge cases; internet videos, which do not contain force feedback context; or expensive but accurate real-world data from humans teleoperating robots.

- **Spatial Intelligence**:
    - Enables robots to comprehend and interact with the physical world. This layer acts as a virtual replica of the real world to train machines and help them learn how to interact and coordinate with each other.

- **Infrastructure Networks**:
    - Provide key resources such as storage, compute, and energy. Infrastructure networks (i.e., DePINs) supply the underlying infrastructure required to run a unified network of autonomous machines.

- **Machine Economy**:
    - Combines all the layers with dedicated protocols that ensure interoperability and coordination between different types of DePINs, AI models, and robots. The layer 1 blockchain serves as the application and transaction infrastructure, enabling atomic composability between all apps and machines. Simultaneously, it provides incentives and disincentives for robots to act in the best interests of humanity – as voted by humans.

- **Organizations**:
    - Allow individuals, communities, and businesses to come together to own and earn from DePAI with fair ownership. DePAI DAOs enable anyone to invest in DePAI and earn from autonomous robots, regardless of location or status, through mechanisms for coordinating funding and decision-making with input from industry professionals.

## Key Technological Drivers

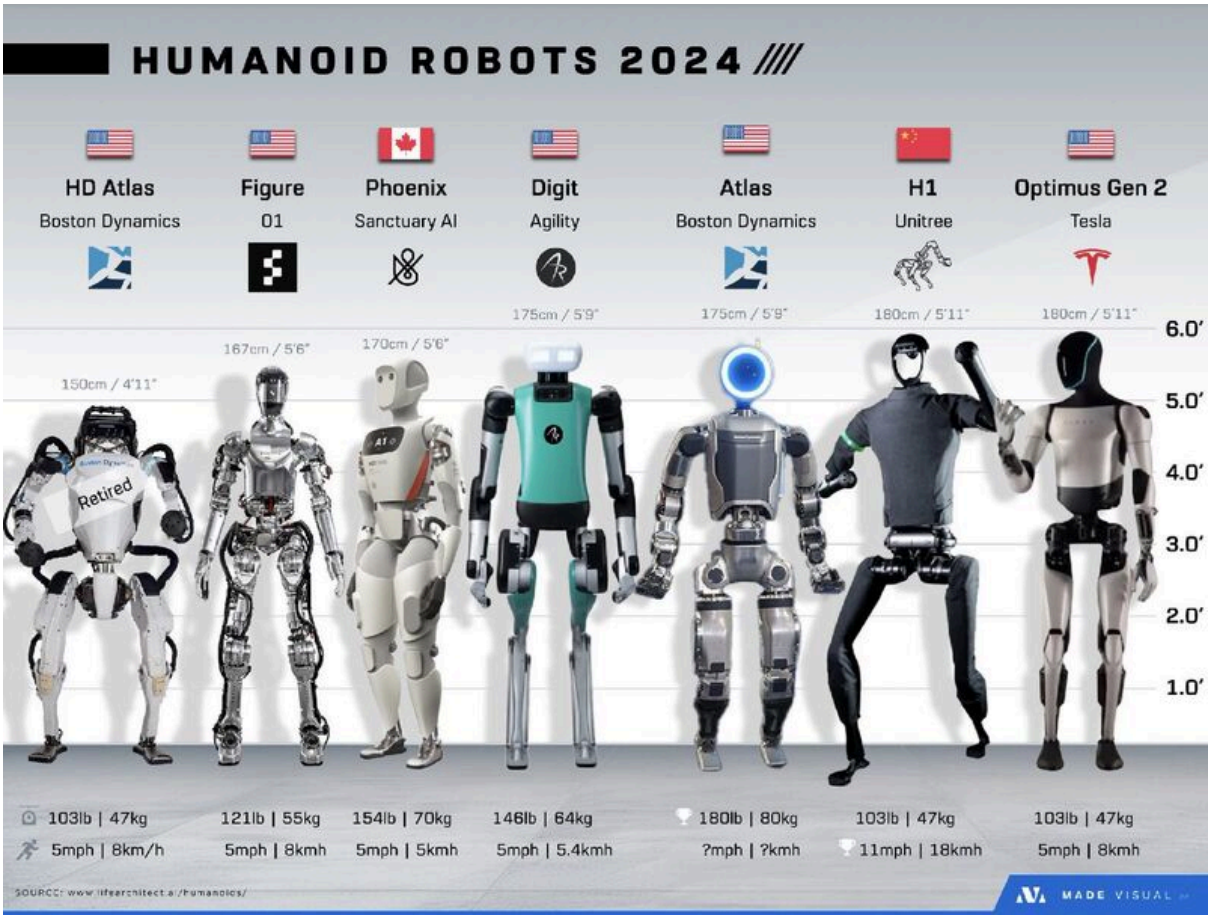
Advancements in the multi-modal large language model (LLM) domain are equipping robots with the cognitive capabilities required to perform complex tasks. Typically, robots interpret their surroundings primarily through two sensory modalities: visual and auditory.

Historically, visual models like convolutional neural networks have been designed for tasks such as object detection or classification, but they do not possess the capability to translate visual information into meaningful actions. On the other hand, large language models excel at interpreting and generating text, yet their ability to perceive and interact with the physical world is limited.

With advancements in AI, robots can now integrate visual perception, language understanding, and physical action within a unified computational framework. Released in February 2025, Figure Ai's Helix[101], a vision-language-action (VLA) model, represents a major advancement in generalist humanoid control by enabling robots to interpret natural language commands, analyze complex scenes, and execute dexterous actions – all without the need for task-specific training.

## Robotics Landscape

**Figure 76: Comparison of Humanoid robots offered by different companies**




Source: Visual Capitalist

The robotics market, valued at around US$97B in 2025, is expected to surpass US$442B by 2034[102]. Growth is being driven by faster AI innovation, lower hardware costs, and rising demand for automation across industries.

AI and robotics are moving hand in hand. Morgan Stanley forecasts US$5T in annual humanoid revenue by 2050[103]. Goldman Sachs predicts that more than 4 million humanoid robots will be in use by 2030[104], transforming industries and reshaping how physical work gets done.

### Why Blockchain for Robotics

Robotics moves cognition out of the cloud and into the physical world – across factories, hospitals, warehouses, and homes. It marks a fundamental shift: AI operating directly in the physical world.

Traditional systems weren't built to manage fleets of intelligent, decision-making machines. Crypto comes in not just for coordination or trust, but for economic agency. With blockchain, robots can participate in tokenized ecosystems where their actions – like collecting data or completing tasks – carry real economic weight.

This is where crypto comes in: decentralized networks, on-chain data, and token incentives. They enable robots to operate securely, interact economically, and connect to global systems without centralized control.

Cross-company collaboration could be difficult without neutral infrastructure, which is exactly what blockchain technology provides. Crypto is the trust layer, and in this next era of automation, crypto could embed itself into the core of robotics value chains across industries like manufacturing, logistics, and healthcare.

## NRN Agents: AI Agents Platform

NRN agents address the shortage of diverse, high-quality real-world data. Most robots are trained on expensive, limited datasets or constrained simulations that fail to mimic the complexity of the real human environment. To combat this, players are invited to a browser based, community-driven platform that gamifies data collection. Contributors are rewarded on-chain with NRN tokens, creating a scalable incentive model for gathering rich, varied demonstrations.

Unlike LLM-based systems, NRN agents model player decisions by aggregating gameplay data into capsules, achieving a more realistic NPC behavior in both physical and virtual environments. Agents also run 24/7 across multiple matches simultaneously, reducing server costs and accelerating training cycles.

By combining developer-friendly tooling, a vibrant token-powered community, and a roadmap bridging virtual environments with real-world robotics, NRN agents stand at the forefront of the emerging AI-agent economy in gaming and robotics – paving the way towards truly generalizable and adaptive intelligence.

## Xmaquina: Democratized Access to Robotics

Xmaquina[105] is a DAO that democratizes access to humanoid robotics and Physical AI by enabling a global community to co-own, co-govern, and co-create the emerging "machine economy." Through on-chain governance and tokenized real-world assets, Xmaquina unites investors, builders, and enthusiasts to collectively fund and benefit from advancements in robotics, automation, and AI.

Xmaquina's mission is to ensure that value is created by humanoid robots and Physical AI is distributed transparently and shared broadly, rather than concentrated in centralized entities. By pooling resources to acquire stakes in robotics startups, deploying revenue-generating machines, and nurturing early-stage DePAI networks, the DAO seeks to shape an inclusive future where intelligent machines augment and replace labor across industries.

The platform is governed by the native token DEUS, which gives holders the rights to vote and to share in the proceeds of the platform. Members can earn DEUS tokens by contributing their expertise, ensuring meritocratic participation and alignment with the overall mission. Ultimately, Xmaquina represents a pioneering fusion of Web3 governance and robotics investment, offering a transparent and inclusive platform for stakeholders to shape and benefit from the future of intelligent machines.

## Peaq: Machine Economy Infrastructure

Peaq[106] is a L1 blockchain tailored for DePINs and Machine Real-World Assets (MRWAs). It facilitates the tokenization of physical devices and infrastructure, transforming them into autonomous economic agents capable of interacting, transacting, and generating revenue within a decentralized ecosystem – establishing a true "Economy of Things." Peaq currently supports a network of over 50 active projects and integrates more than 6 million machines, vehicles, and robots within its ecosystem.

Peaq is built on top of Parity's substrate framework, it offers both EVM compatibility and Rust-based WebAssembly smart contracts, catering to a broad range of developers. Its core network is optimized for high-volume, low latency operations, with a throughput of 10,000-100,000 transactions per second.

To tap on cross-chain collaboration, Peaq has integrated with LayerZero[107] to access liquidity and data from 90+ blockchains, enabling seamless omnichain interactions for its DePINs. As the DePIN market matures, Peaq's specialized infrastructure, modular toolkit, and community-centric governance will position it to be a leader in the sector.

## Key Trends Ahead

The rise of robotics is unlocking entirely new markets, from decentralized platforms for robotic services to tokenized infrastructure and open marketplace for machine generated data. It is currently still in its infancy. First mover will have an advantage as they get to define the standards: blockchain layers that enable secure robot-to-robot communication, DAOs coordinating fleets of autonomous machines, or marketplaces turning physical data into on-chain assets. To effectively address DePAI, improvements are needed across the following key areas.

- **Battery optimization**:
    - Robotic systems, especially those operating autonomously or in remote environments, rely heavily on efficient power management.
    - In decentralized networks, robots often perform continuous data processing, communication, and decision-making tasks, which can be energy-intensive.
    - Improving battery optimization is crucial to support sustained connectivity and computation required for decentralized AI processing.
    - At the same time, it allows for deployment in environments where power sources are limited or unavailable.
- **Latency optimization**:
    - Decentralized networks distribute computation and data across multiple nodes, which can introduce communication delays.
    - Low latency is essential because real-time decision-making and control depend on rapid data exchange between robots and network nodes.

    - High latency can degrade performance in tasks requiring immediate responses, such as navigation, obstacle avoidance, and human-robot interaction.

- **Data collection**:
    - High-quality, diverse, real life data improves the training and refinement of decentralized AI models.
    - Efficient data aggregation and sharing across the network enable better collective learning and decision-making.

# 9.3 Decentralized Science (DeSci)

Decentralized Science (DeSci) is a movement and ecosystem that leverages blockchain and decentralized technologies to transform the traditional scientific research process. It aims to make scientific research more open, transparent, accessible, and collaborative by removing centralized intermediaries and enabling direct interaction among researchers, funders, and the public.

The scientific research process faces significant challenges, particularly in translating basic research into practical applications through translational research. The "Valley of Death" causes 80–90% of research projects to fail before reaching human trials[108], with only 0.1% of drug candidates becoming approved treatments.

Misaligned incentives across academia, funding bodies, and industry lead to challenges such as a lack of funding, reduced collaboration between scientists and clinicians, and poor replicability and reproducibility of scientific findings – causing most research to falter in the “Valley of Death.”

Crypto is well-suited for this, as it excels at capital formation, grants virtual rights, and enhances liquidity.

## Key Principles of DeSci

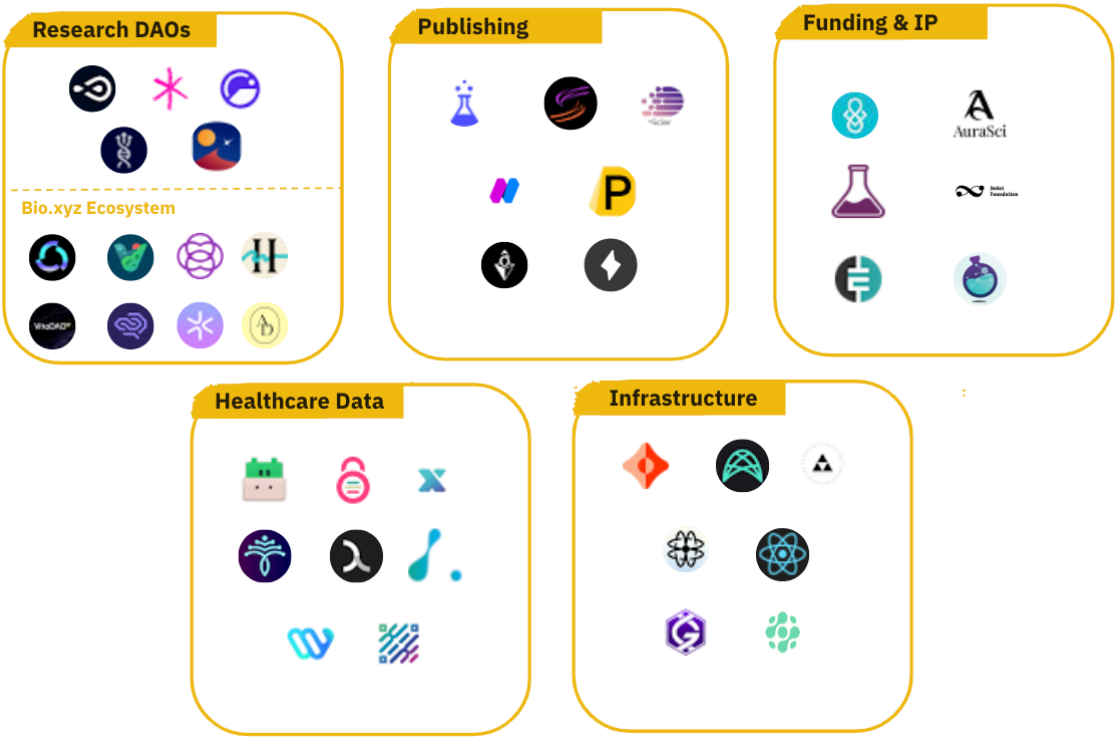
- **Decentralized**:
    - Blockchain is used to distribute control and ownership of scientific data, publications, and funding, reducing reliance on centralized institutions like publishers or funding agencies.

- **Immutable**:
    - Stores research outputs and peer reviews on blockchain to create tamper-proof, permanent records.

- **Transparency and Open Access**:
    - Ensures that research data, methodologies, and results are openly available and verifiable by anyone, enhancing reproducibility and trust.

- **Incentivization**:
    - Employs token-based economies, NFTs, or DAOs to reward contributors, incentivize collaboration, and democratize funding.

**Figure 77: DeSci ecosystem map**




Mentions of specific projects are for illustrative purposes only and do not constitute endorsement by Binance
Source: ResearchHub, Binance Research

## VitaDAO: Community-Driven Longevity Research

VitaDAO[109] is a community-governed cooperative focused on decentralized drug development, with a mission to accelerate R&D in longevity and extend human health-span. While the biopharma industry attracts significant late-stage investment, early-stage funding – especially in longevity research –remains scarce, and incentives among patients, researchers, and industry are often misaligned.

To address these challenges, VitaDAO employs innovative governance frameworks via decentralized autonomous organizations (DAOs), non-fungible tokens (NFTs), and financial tools such as algorithmic automated market makers (AMMs), all operating on the Ethereum blockchain.

Biopharma value primarily resides in intellectual property (IP), specialized knowledge, and research data. However, traditional IP models encourage monopolization through patent thickets, limiting data sharing, collaboration, and public ownership – despite public funding of early-stage research. Early-stage drug development funding is limited, and market incentives often lead to high drug prices.

VitaDAO offers a solution by creating an open cooperative that anyone can join to support and finance novel therapeutics and research in longevity science. In return, VitaDAO acquires IP rights to the early-stage therapeutics it funds, building a portfolio of IP and

data assets. These assets can be shared and monetized through platforms like Ocean Marketplace, fostering open science and innovative business models.

Governance and ownership of VitaDAO are managed through VITA tokens. Contributors – whether through work, funding, data, or IP – receive VITA tokens, granting them democratic participation in directing research priorities, accessing and monetizing data, and managing the IP portfolio.

## Bio Protocol: Open Biotech Infrastructure

Bio[110] is an innovative financial layer dedicated to funding and advancing early-stage biotech. Its mission is to transform biotech innovation by empowering global communities of patients, researchers, and crypto participants to build user-owned research networks that support emerging biotechnologies from inception.

Bio enables scientists to secure funding, generate value from their research, and equitably capture and distribute that value through commercial success. By dismantling traditional barriers and implementing a permissionless framework, Bio can accelerate life-saving discoveries while enhancing accessibility for all.

## Molecule: Decentralized Biotech Funding

Molecule[111] leverages emerging technologies in biotechnology and translational research through its decentralized platform, Catalyst. By utilizing blockchain technology, Molecule enables the tokenization of intellectual property (IP) into liquid, tradable assets known as IPTs. This innovative approach empowers researchers, patients, and investors to collaboratively fund, govern, and advance scientific innovation.

## LabDAO: On-Chain Lab Coordination

LabDAO[112] is a decentralized organization focused on open-source drug discovery, bringing scientists and engineers together to share tools and resources for life science research. PLEX is a library maintained by LabDAO that allows scientists to run BioML (Biological Machine Learning) tools from the command line, simplifying the process and enabling interaction with the LabDAO exchange. It aims to accelerate progress in the field by making scientific tools more accessible and providing data ownership proof through non-fungible tokens.

## Challenges Ahead for DeSci

- **Better Tooling**:
    - The widespread adoption of decentralized science (DeSci) depends heavily on the development of intuitive, accessible, and robust tools.
    - Future advancements will focus on creating user-friendly interfaces that simplify complex blockchain and DAO interactions, making it easier for researchers, funders, and participants from diverse backgrounds to engage seamlessly.
    - Enhanced tooling will include streamlined proposal submission systems, transparent funding dashboards, and integrated collaboration platforms that reduce technical barriers.
    - By prioritizing usability, DeSci platforms can foster greater participation, accelerate research workflows, and ensure that decentralized governance and funding mechanisms are accessible to both scientific experts and non-technical stakeholders.

- **Community**:
    - The success of DeSci hinges on building a vibrant, inclusive, and multidisciplinary community that spans researchers, patients, investors, technologists, and enthusiasts worldwide.
    - Future efforts will focus on expanding outreach and education to attract diverse participants, fostering collaboration across academia, industry, and the public.
    - By cultivating a strong network of contributors and stakeholders, DeSci initiatives can leverage collective intelligence, democratize decision-making, and increase funding pools.
    - Community growth will also drive innovation in governance models, incentivization structures, and open science practices, ultimately creating a more resilient and impactful decentralized research ecosystem.

# 10 / Institutional Adoption

## 10.1 From Adoption to Deployment

The blockchain and crypto ecosystem has matured significantly in 2025, with widespread adoption across enterprises of all sizes and institutional investors. This growing adoption of blockchain technology is driving innovation, new product development, and expanding use cases that go far beyond retail crypto trading.

**Institutional Adoption Reaches New Heights**

- **Fortune 500 companies leading the way**: Approximately 60% of fortune 500 companies[113] are working on blockchain projects. These initiatives span supply chain transparency, cross-border payments, decentralized finance (DeFi) integrations, and digital identity solutions.
- **SME crypto adoption surges**: In the U.S., one third of small and medium sized enterprises now use crypto in some capacity, doubling the adoption rate in 2024. SMEs are leveraging blockchain technology for payments, fundraising via tokenization and accessing DeFi services that were previously unavailable to them.
- **Institutional investor confidence**: More than 80% of institutional investors[114] plan to increase their exposure to crypto assets this year. This growing confidence is supported by the development of sophisticated institutional-grade products such as regulated custody solutions, crypto derivatives, and blockchain-based asset tokenization platforms. These products provide enhanced security, compliance, and liquidity tailored to institutional needs.

**Product Growth Across Key Infrastructure Verticals**

- **Custodial Services for Digital Assets**: Institutions increasingly demand secure custody solutions for cryptocurrencies. Companies like Coinbase Custody, BitGo, and Binance Custody offer institutional-grade custody services with insurance coverage, multi-signature wallets, and regulatory compliance, enabling large-scale asset management.
- **Institutional-Grade Trading Platforms**: Platforms such as Binance Institutional, Genesis Trading, and Cumberland provide tailored trading services including OTC desks, algorithmic trading, and deep liquidity pools designed specifically for institutional clients.
- **Blockchain-Based Derivatives and Structured Products**: The launch of futures, options, and structured products on platforms like Bakkt, CME Group, and Binance Futures allows institutions to hedge risk, gain exposure, and implement sophisticated trading strategies on digital assets.

- **Tokenized Assets and Security Tokens**: Institutional investors are increasingly participating in tokenized real-world assets such as real estate, equities, and bonds through platforms like tZERO, Securitize, and Polymath, which facilitate compliant issuance and trading of security tokens.
- **Institutional DeFi Solutions**: Products like Aave Arc and Compound Treasury offer permissioned DeFi lending and borrowing services tailored for institutional participants, combining DeFi innovation with regulatory compliance.
- **Blockchain Analytics and Compliance Tools**: Institutions rely on advanced analytics platforms such as Chainalysis, Elliptic, and CipherTrace to ensure AML and KYC compliance, monitor transaction risk, and meet regulatory requirements.
- **Enterprise Blockchain Platforms**: Solutions like Hyperledger Fabric, R3 Corda, and Ethereum Enterprise Alliance enable institutions to build private, permissioned blockchain networks for supply chain, finance, and identity management applications.

**TradFi Institutions Enter the Arena**

We also saw TradFi institutions actively building and adopting blockchain technologies:

- **JPMorgan** is launching JPMD[115], a permissioned deposit token on Coinbase's Base blockchain representing digital commercial bank deposits. JPMD offers institutional clients 24/7 settlement and interest payments, enabling faster, on-chain digital asset settlements and cross-border B2B transactions. JPMD is exclusive to JPMorgan's institutional clients, providing seamless integration with traditional banking products and improved fungibility.
- **Mastercard**[116] has partnered with Ondo finance to roll out real-world assets (RWA) to the Multi-Token Network (MTN), allowing participating businesses to earn daily yield via tokenized assets with 24/7 subscriptions and redemptions, without the need for stablecoins onramps or settlement windows.
- **Apollo** Launches US$785B AUM Tokenized Credit Fund ACRED[117] on Solana DeFi With Drift Institutional and Kamino Finance.
- **Reliance Jio**[118], India's telecom giant works with Polygon to integrate blockchain technology into web services and solve real world problems for its 450 million users.

# 10.2 Tokenization and Real-World Assets

Tokenization of real-world assets (RWAs) remains a core institutional adoption theme. A paper published by Standard Chartered and Synpulse[119], predicts that demand for overall tokenised assets could reach USD 30.1 trillion by 2034, and that trade finance assets could become one of the top three tokenised assets globally, at 16% of the total. Currently total RWA value on-chain has grown tremendously to US$24B in three years. The top three tokenized assets globally are private credit, U.S. treasury debts and commodities.

## Tokenized Trade Finance

Trade finance enables payment for merchandise and services between exporters and importers. It's an umbrella term that encompasses everything from letters of credit to purchase orders and receivables factoring, and it can be done domestically and internationally.

The rise of embedded finance – and specifically tokenization, which is underpinned by blockchain technology – helps make trade finance more efficient by improving and speeding the transfer of, say, letters of credit and short-term financing. Rendering the physical trade documentation that enables the financing (such as bills of lading or the terms of the financing itself) into digital representations over the blockchain allows for instant verification of the transaction and terms. Generally speaking, the programmable nature of the tokens themselves enables smart contracts that allow funds to be released to firms once terms are agreed upon and fulfilled.

**Case Study: OLEA**

Olea Global is a digital trade finance platform that connects businesses seeking supply chain financing with investors interested in trade finance assets. As a joint venture between Standard Chartered's innovation arm, SC Ventures, and China's leading technology firm Linklogis, Olea directs global liquidity to support trade and supply chain finance. The platform enhances access to trade finance – particularly for SMEs – by prioritizing transparency, risk management, and technological efficiency. Operating across more than 70 trade corridors, Olea provides businesses with vital liquidity while offering investors exposure to a diversified asset class.

It has partnered with SWIAT, a fintech company specializing in the development of blockchain-based software solutions for financial market infrastructure and digital asset management, to launch tokenized receivables, a first step in enabling fully digitized supplier financing on the blockchain.

## Tokenized Equities

Tokenized stocks are emerging as a significant trend in 2025, revolutionizing traditional equity markets by enabling fractional ownership and increased accessibility. By leveraging blockchain technology, tokenized stocks offer enhanced liquidity, faster settlement times, and greater transparency for investors. This innovation is attracting institutional and retail participants alike, fostering a more inclusive and efficient trading environment that bridges conventional finance with the digital asset ecosystem.

**Figure 78: Comparative analysis of tokenized stock offerings**

| Category | xStocks | dShares | Robinhood* |
|---|---|---|---|
| **Product Offering** | 61 stocks live - EU and US names, including niche and mid-cap listings. | Launching with major US large-cap stocks and selected US bonds; narrower initial range. | 200+ stocks & ETFs; also includes tokenized private company shares via indirect SPV exposure |
| **Token Structure and Chain** | SPL on Solana; BEP-20 on BNB Chain | EVM-compatible tokens | Synthetic stock derivatives currently on Arbitrum |
| **Issuer** | Backed Finance AG | Dinari | Robinhood Europe |
| **Wallet Transferability** | Fully transferable & withdrawable to external wallets | Transferable to external wallets, used in DeFi | Only tradable within Robinhood's ecosystem on Arbitrum |
| **Trading Hours** | 24/7 or 24/5 depending on platform | Likely 24/7 (on-chain) | 24/5 now, planning 24/7 with Robinhood L2 rollout |

*Robinhood's assets are synthetic derivatives on Arbitrum, not directly transferable tokenized stocks

Source: Binance Research, as of June 30, 2025

**Backed Finance**

Backed Finance advances the vision of a borderless financial system by tokenizing equities through its xStocks initiative, offering diverse, transparent, and accessible assets fully backed 1:1 by underlying equities. To ensure data integrity and efficiency, Chainlink joins the xStocks Alliance, providing oracle infrastructure that enhances market data accuracy and speed. This partnership supports xStocks' expansion across multiple blockchains, promoting neutrality in asset availability.

xStocks allow users to trade popular equities such as Apple, Amazon, and Microsoft, as well as emerging crypto companies, with the efficiency and speed of blockchain technology. It is currently partnered with ByBit, Kraken and Solana protocols like Kamino, Raydium, and Jupiter to offer tokenized stocks to investors and also enabling tokenized stocks to be used as collateral in lending markets.

**Dinari**

Dinari offers blockchain-based, tokenized U.S. stocks, known as dShares, to qualified non-US investors. dShares offer 1:1 exposure to traditional assets such as stocks and ETFs, enabling users to trade them across multiple blockchains. Dinari has obtained broker-dealer registration for its subsidiary, becoming the first tokenized equity platform to receive this approval in the U.S.

In June 2025, crypto exchange Gemini announced a partnership with Dinari to launch tokenized U.S. stocks, starting with MSTR, for customers in the EU. This collaboration aims to enhance accessibility and liquidity by leveraging Dinari's regulatory-approved infrastructure and Gemini's trusted exchange ecosystem.

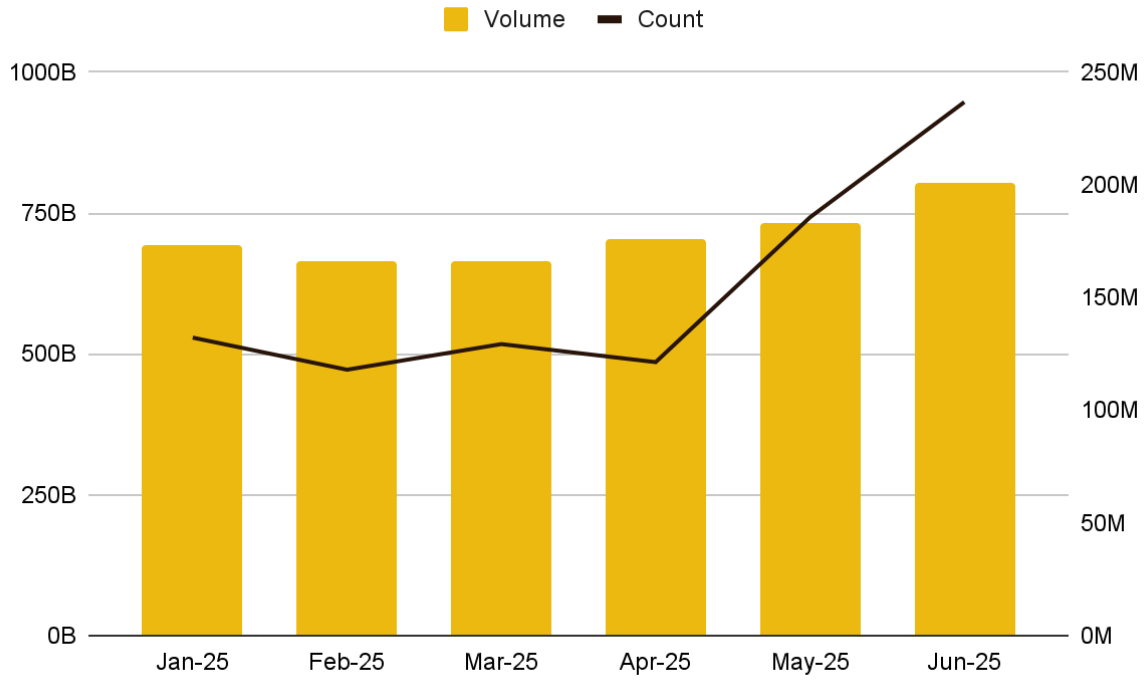
**Robinhood**

Robinhood has launched U.S. stock and ETF tokens in the European Union, issued on the Arbitrum L2 blockchain. The company plans to expand its access to tokenized stocks, enabling 24/7 trading of fractional shares in the near future, by leveraging on its proprietary L2 technology. With this move, Robinhood aims to provide continuous trading beyond traditional market hours, improving liquidity and accessibility for retail investors.

# 10.3 Payments

Stablecoins – digital currencies pegged to stable assets such as the U.S. dollar – have become a cornerstone of blockchain-based payments in 2025. Their market capitalization has surged dramatically, reaching over US$253.8 billion, underscoring their critical role in enabling fast, transparent, and cost-effective digital transactions worldwide.

**Figure 79: Stablecoin transaction volume and count grew significantly in 2025**



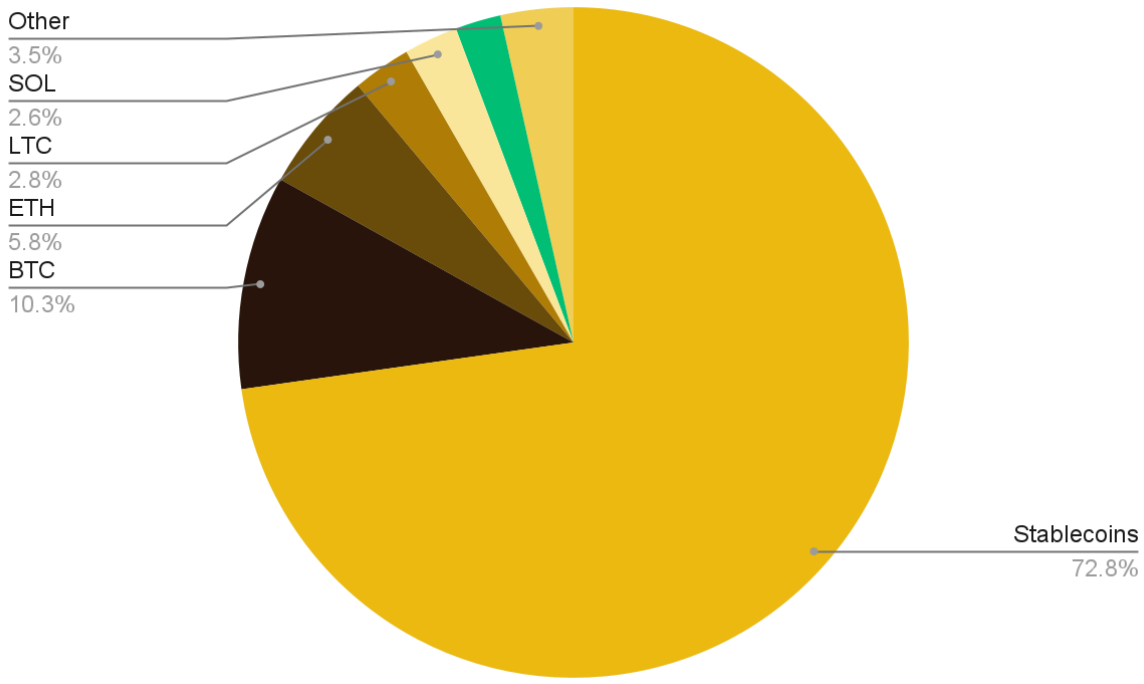

Source: Visaonchainanalytics, Binance Research, as of June 30, 2025

The growth of stablecoins is tightly linked to the broader adoption of blockchain payments, which are revolutionizing cross-border remittances and international commerce. Traditional international transactions continue to incur significant costs; on average, over US$120 billion[120] is lost annually due to fees. These fees typically amount to around 6.6% per transaction[121], largely driven by charges from Automated Clearing House (ACH) partner banks and correspondent banking networks. This shift is particularly impactful in emerging markets, where high remittance costs have historically limited financial inclusion.

In 2025, crypto-linked payment cards are gaining significant traction in Europe, particularly for small-value transactions[122]. Data shows that 45% of crypto card transactions are under €10 (approximately US$11.7), a segment historically dominated by cash payments.

While the European Central Bank reports that 21% of all card payments across the euro area occur online, data from CEX.IO reveals that crypto card users conduct 40% of their transactions on the internet – nearly double the average. This indicates a strong preference among crypto users for digital commerce and e-commerce platforms.

**Figure 80: Stablecoin is still the main digital asset used for crypto card purchases by transaction count**




Source: CEXIO, Binance Research, as of June 30, 2025

**Recent Highlights from the PayFi Sector**

- **Mastercard** partnered with Chainlink[123] to enable on-chain crypto purchases for its 3 billion cardholders. **Mastercard**[124] integrated with Paxos (USDG), Fiserv (FIUSD), Paypal (PYUSD) for settlements and stablecoin payments for consumers and merchants.
- **Stripe** purchased Privvy[125], a Web3 wallet infrastructure provider, to enhance its capabilities in supporting cryptocurrency and blockchain-based payments.
- **Shopify** allows USDC payments via the BASE network[126], allowing merchants to accept cryptocurrency payments directly on checkout.
- **Aeon** has partnered with Stellar[127], the leading blockchain platform known for fast and low-cost cross-border payments, to accelerate the adoption of Web3 payment solutions across Southeast Asia.
- **Visa** has formed a strategic partnership with Yellow Card[128], a leading pan-African stablecoin orchestrator, to extend its settlement capabilities throughout the Central, Eastern Europe, Middle East and Africa region. **Visa and Bridge**[129] partnered to offer stablecoin linked-cards in Latin America.
- **Walmart and Amazon**[130] are considering launching their own stablecoins to streamline payment processes in their E-commerce segment, potentially saving billions in banking fees.
- **Block**[131] integrated Bitcoin payments via Lightning Network on all Square terminals with full rollout by 2026.
- **JPMorgan**[132] has launched GBP-denominated blockchain deposit accounts on Kinexys Digital Payments for corporate clients for cross border settlements.
- **Kraken** debuts peer-to-peer payments app Krak[133] that enables users to send and receive funds across borders.

# 11 / Regulation and Policy

The first half of 2025 marked a pivotal shift in global crypto regulation, as major economies moved from ambiguity to decisive action. This created a complex and divergent policy landscape with profound impacts on capital flows, asset performance, and the structure of the crypto industry.

**Figure 81: Major Crypto Regulatory Policy Matrix for H1 2025**

| Parameter | United States | European Union | Hong Kong | Singapore |
|---|---|---|---|---|
| **Regulatory Stance** | **Pro-Innovation Shift:** From enforcement to legislation to boost institutional adoption. | **Prudent & Comprehensive:** Full MiCA implementation with a focus on consumer protection. | **Active & Open:** Attracting crypto innovation and capital via clear licensing and support. | **Strict & Reputation-Focused:** Cracking down on regulatory arbitrage to protect its financial center status. |
| **Legislative Activity** | CLARITY & GENIUS Acts (define jurisdiction, stablecoins); SAB 121 repealed. | MiCA implemented (for CASPs, stablecoins); DAC8 (for tax reporting). | VASP license expansion; Stablecoin licenses from Aug 2025. | Mandatory DTSP licensing by June 30, 2025, for all firms. |
| **Stablecoin Framework** | Legislative path to define as non-securities, focusing on reserves & licensing. | Strict enforcement: Only MiCA-authorized stablecoins allowed; USDT delisted. | Formal licensing framework for issuers being established. | Regulated under broad and stringent DTSP licensing requirements. |
| **DeFi / NFTs** | Partial exemptions for DeFi activities; governance token status remains unclear. | Regulatory vacuum (outside MiCA); specific rules expected post-2026. | Supportive of innovation, with a focus on tokenization and Web3. | High scrutiny; DeFi platforms fall under strict DTSP licensing. |
| **Market Impact** | Positive sentiment, institutional inflows to compliant products (BTC ETFs); performance diverged by risk. | Liquidity fragmentation post-USDT delisting; activity shifting to DEXes. | Inflow of firms & talent; competing with Singapore for hub status. | Outflow of firms due to strict licensing; market consolidation. |

Source: Bloomberg, Binance Research, as of June 30, 2025

# 11.1 United States: From Regulation by Enforcement to Legislative Clarity

In the first half of 2025, the inauguration of a new administration fundamentally reshaped the U.S. crypto regulatory environment. On January 23, President Trump signed an executive order[134] on "Strengthening American Leadership in Digital Financial Technology," setting a clear pro-innovation tone for the responsible development of digital assets. The order not only aims to establish the U.S. as the "world's crypto capital" but also created the "President's Working Group on Digital Assets," marking a formal shift from the previous administration's relatively cautious and enforcement-centric strategy to a more proactive, legislative-led approach.

## New Leadership and Philosophy

At the heart of this strategic shift was the change in leadership at key regulatory agencies. In May 2025, the appointment of Paul S. Atkins, known for his pro-business and crypto-friendly stance, as Chairman of the **Securities and Exchange Commission (SEC)** was seen as a landmark event. Shortly after taking office, Atkins announced that the SEC would halt its "special enforcement actions" against cryptocurrencies and commit to establishing a clear regulatory framework. To support this goal, an SEC Crypto Task Force, led by Commissioner Hester Peirce, was formed to develop rules through collaboration with the industry and the public.

Similarly, at the **Commodity Futures Trading Commission (CFTC),** Acting Chair Caroline Pham aligned the agency with the Department of Justice's new policy to "end regulation by prosecution," instructing staff to reduce enforcement actions for registration violations unless there is evidence of willful misconduct.

This leadership change quickly translated into concrete policy actions. The SEC rescinded the controversial Staff Accounting Bulletin No. 121 (SAB 121), which had required companies custodying crypto assets to record them as liabilities, thereby hindering banks from offering custody services. The newly issued SAB 122 is expected to significantly lower the barrier for traditional financial institutions to enter the crypto custody space.

## Landmark Bills and Clarity Pathways

The most important progress in the first half of the year was the breakthrough of two key bills in Congress.

First was an evolved version of the Financial Innovation and Technology for the 21st Century Act (FIT21) – the **Digital Asset Market CLARITY Act of 2025**. This bill gained bipartisan support in the House and advanced, with its core objective being to resolve the long-standing jurisdictional dispute between the SEC and the CFTC. The act delineates regulatory boundaries by defining "digital commodities" (under CFTC jurisdiction) and assets related to an "investment contract" (under SEC jurisdiction), based on the decentralization level of the associated blockchain. This provides a clear legal pathway for digital assets to transition from their initial security status (during the fundraising phase) to a commodity status upon maturity, addressing the market's most pressing need for legal certainty.

Second was the significant progress of the stablecoin legislation, the **Guiding and Establishing National Innovation for U.S. Stablecoins (GENIUS) Act**, in the Senate. This bill creates a federal-level regulatory framework for payment-type stablecoins, requiring issuers to have 1:1 backing with high-quality liquid assets and to be licensed at the federal or state level. Crucially, the act explicitly excludes compliant stablecoins from the definition of "securities," thereby removing them from the SEC's jurisdiction. This move clears a major legal hurdle for payment giants like Visa and PayPal to integrate stablecoins into their payment networks.

Additionally, Congress took action to **repeal the digital asset tax reporting rules for Decentralized Finance (DeFi) brokers**. The previous rules were criticized for their overly broad definition of a "broker," which imposed unrealistic compliance burdens on DeFi protocols. The repeal is seen as a major encouragement for innovation in the DeFi space, alleviating regulatory pressure on the industry.

## Asset Performance Divergence

The U.S. regulatory shift has not been a universal boon for all crypto assets; instead, it has fostered a structural divergence in performance among different asset classes.

The logic is clear: the core demand of institutional capital is legal and regulatory certainty. In the era of "regulation by enforcement," the legal status of any token could change with a single SEC lawsuit. This immense uncertainty kept the vast majority of conservative institutional capital on the sidelines. The new framework formed in the first half of 2025 created clear, compliant investment channels for specific types of assets. The spot Bitcoin ETF has become a mature and successful investment vehicle, attracting huge capital inflows. The CLARITY Act's clear classification of Bitcoin as a "digital commodity" regulated by the CFTC further solidifies its legitimate status.

Consequently, for pension funds, asset management firms, or corporate treasuries, allocating to Bitcoin via an ETF has become the path of least regulatory resistance. In contrast, DeFi and altcoins remain in a legal gray area. Although the CLARITY Act aims to provide a path to commodity status, this process is not automatic and requires SEC review and a yet-to-be-defined "maturity" test. This has led to a bifurcation of capital flows: **driven by regulatory clarity, institutional funds are pouring into Bitcoin, supporting its price and solidifying its market dominance.** Meanwhile, although DeFi and other altcoins continue to innovate technologically, they will remain largely confined to the higher-risk venture capital domain until their regulatory path becomes as clear as Bitcoin's.

# 11.2 European Union: MiCA Framework and Market Frictions

The first half of 2025 marked the full implementation phase of the European Union's landmark Markets in Crypto-Assets (MiCA) regulation. Since coming into effect in late 2024, the rules for stablecoins (Asset-Referenced Tokens, ARTs, and E-Money Tokens, EMTs) and Crypto-Asset Service Providers (CASPs) have become fully applicable. During this period, the European Banking Authority (EBA) and the European Securities and Markets Authority (ESMA) intensively published Level 2 and Level 3 technical standards, covering everything from complaint handling to ICT resilience, providing detailed guidance for the framework's implementation.

## Stablecoin Market Reshuffle

MiCA imposes extremely strict requirements on stablecoin issuers, including the necessity of being authorized within the EU, having reserves that provide full 1:1 backing, and transparent reporting. This provision has had an earthquake-like impact on the market landscape. **Tether (USDT), the world's largest stablecoin, has effectively been excluded from the compliant EU market** as it did not seek MiCA authorization. Consequently, major exchanges like Coinbase, Kraken, and Binance were forced to delist USDT trading pairs for European users or convert them to a "sell-only" mode.

This move left a huge vacuum in the market, significantly increasing the market share of compliant alternatives like Circle's USDC and EURC. However, data shows that despite the market share shift, the overall trading volume of euro-denominated stablecoins has not seen significant growth, suggesting that the current shift is more driven by regulatory compliance than a natural surge in market demand.

# 11.3 Asia: Diverging Hubs and Regional Landscape

## Hong Kong: Open-Door Approach

Hong Kong is actively positioning itself as an innovation-friendly hub for the global crypto industry. The Hong Kong Monetary Authority (HKMA) has announced that it will begin accepting applications for stablecoin issuer licenses on August 1, 2025, under its new stablecoin ordinance. At the same time, regulators are continuously expanding the business scope of Virtual Asset Service Providers (VASPs) under the Licensing and Electronic Assets Platform (LEAP) initiative, which also facilitates the issuance and trading of tokenized bonds. Furthermore, Hong Kong's territorial tax principle and its policy of exempting long-held crypto assets from capital gains tax pose a strong attraction for investors and traders.

### Singapore: Crackdown on Regulatory Arbitrage

In sharp contrast to Hong Kong, Singapore has transitioned from being perceived as a crypto-friendly haven to a jurisdiction with extremely strict regulations. Its core objective is to eliminate regulatory arbitrage and maintain its reputation as a top-tier, low-risk financial center. The Monetary Authority of Singapore (MAS) set a deadline of June 30, 2025, mandating that all crypto companies registered in Singapore and serving overseas clients must obtain a Digital Payment Token Service Provider (DTSP) license. This "compliance cliff" has triggered a "crypto corporate exodus," with numerous crypto companies restructuring or relocating their operations to other regions like Hong Kong and Dubai.

### Other Key Asian Jurisdictions

- **South Korea**: The Virtual Asset User Protection Act[135] is set to take effect in July 2025. This legislation requires crypto firms to safeguard user deposits, maintain insurance for liability, and hold a significant portion of assets in cold storage. The Financial Services Commission (FSC) will also have the authority to investigate and penalize irregular crypto trading activities.
- **Vietnam**: Vietnam is actively developing a comprehensive legal framework for cryptocurrencies, which is expected to be completed by May 2025. The framework will focus on establishing clear rules for Anti-Money Laundering and Counter-Financing of Terrorism (AML/CFT) measures.
- **Malaysia**: Led by the Securities Commission Malaysia (SC), the country has established a comprehensive regulatory framework for digital assets, covering licensing requirements for exchanges, custodians, and intermediaries to ensure they meet stringent standards for governance, risk management, and anti-money laundering (AML).
- **Thailand**: To stimulate innovation and investment in the digital asset sector, Thailand has implemented a five-year exemption[136] on capital gains tax for cryptocurrency transactions. Simultaneously, Thailand proposed establishing a blockchain-based payment system for BRICS nations, aiming to promote trade and investment while reducing reliance on the US dollar.

## 11.4 Global Coordination Efforts

In addition to the efforts of individual jurisdictions, regulatory coordination at the global level has also progressed. The **Crypto-Asset Reporting Framework (CARF)**, developed by the Organisation for Economic Co-operation and Development (OECD), is one of the most significant initiatives. The framework aims to establish a unified global standard for tax information exchange to address the challenges of tax evasion posed by crypto assets. With major economies like the EU taking the lead in adoption, more countries are expected to follow in the coming years, forming a global network for crypto-asset tax transparency.

# 12 / Themes for 2H 2025

Looking ahead, we are delighted to see the market's remarkable performance in the past year and are optimistic about the following themes for the remainder of 2025:

1. **Fed Pivot and Fiscal Expansion Drives Risk-On Rotation**: Several macro tailwinds are shaping the outlook for the second half of 2025. Given the backdrop of declining inflation and a gradually slowing labor market, the bar for the Fed to shift back to a hawkish stance appears high. Unless inflation rebounds sharply — driven by tariffs — and proves both persistent and expectation-shifting, a delay in the Fed's pivot is unlikely. Therefore, the policy balance leans toward the Fed cutting rates as expected, or even adopting more aggressive easing amid weak growth.

   On the other hand, the 'One Big Beautiful Bill' could increase U.S. debt by US$2–3T. While it is unlikely to significantly affect government spending in the remainder of 2025, expectations of moderate fiscal stimulus beyond this year may boost market sentiment. In the near term, expanded fiscal leverage could support consumer and business activity, even as it raises longer-term concerns around debt sustainability and upward pressure on bond term premiums.

   Together, the Fed's dovish pivot and a net stimulative fiscal outlook strengthen the case for a pro-cyclical, risk-on rotation.

2. **U.S. Policy Shift from 'Regulation by Enforcement' to 'Leadership Through Legislation'**: In 2025, the U.S. is shifting from enforcement-focused crypto regulation to establishing clear legal frameworks to provide industry stability. With events like "Crypto Week" in the second half of the year, key legislative progress is expected on stablecoins, DeFi, Bitcoin reserves, and CBDCs.

   i. **Stablecoin Regulation**: The GENIUS Act has passed the Senate and is under House review. The legislative process includes House committee review, floor votes, reconciliation if needed, final passage, and presidential signing. Meanwhile, the House passed its own stablecoin bill – the STABLE Act (H.R.2392) – through the House Financial Services Committee in April 2025. Coordination between these bills could yield a unified stablecoin regulatory framework, potentially finalized in H2 2025.

   ii. **Digital Asset Framework – CLARITY Act**: This bill offers a "safe harbor" for certain DeFi activities, exempting them from SEC/CFTC registration. It was reported to the House in June and will be reviewed during "Crypto Week" in July.

   iii. **Bitcoin Strategic Reserve – BITCOIN Act (S.954)**: Proposes a U.S. strategic Bitcoin reserve for transparent federal holdings. Introduced in March, further discussion is expected later this year.

iv. **CBDC Ban – Anti-CBDC Surveillance State Act**: Seeks to prohibit the Fed from issuing CBDCs (Central Bank Digital Currency) directly to individuals and limit their monetary policy use. Part of the "Crypto Week" agenda with potential progress in H2 2025.

3. **TradFi-Crypto Integration Accelerates Through IPOs and M&A**: The convergence of cryptocurrency and traditional finance (TradFi) is accelerating, propelled by increasing regulatory clarity, maturing infrastructure, and growing institutional confidence. Over the past six months, there has been a notable rise in crypto company IPO filings, exemplified by firms such as Circle. Institutional adoption has deepened significantly, with leading asset managers like BlackRock and Fidelity launching spot Bitcoin and Ethereum ETFs that now collectively oversee tens of billions in assets under management.

   Concurrently, legacy financial institutions are pursuing strategic acquisitions of crypto-native firms, while crypto companies are expanding their footprint into traditional financial services.

   On the product side, the launch of tokenized assets and on-chain financial instruments is further bridging the gap between the two ecosystems. Additionally, corporate treasuries are increasingly diversifying their reserves with crypto assets – particularly Bitcoin – following early adopters like MicroStrategy, with a growing number of public and private companies adopting similar strategies.

   Collectively, these developments mark 2024–2025 as a pivotal inflection point in which cryptocurrency is transitioning decisively into the financial mainstream. However, some analysts remain cautious, expressing skepticism regarding the debt structures and treasury management practices adopted by certain companies in this evolving landscape.

4. **Stablecoins Plug Into Traditional Payment Rails**: Stablecoins remain one of the most compelling and scalable use cases for blockchain, offering fast, low-cost, and borderless value transfer. In the past six months, stablecoin market capitalization has climbed past US$160B, fueled by growing usage across remittances, on-chain trading, DeFi, and enterprise payments. Major players like PayPal and Visa have expanded stablecoin integrations, while Shopify began piloting USDC payments – highlighting rising institutional confidence and practical utility.

   2025 is emerging as a breakthrough year for stablecoins, with significant regulatory traction. In the U.S., the proposed GENIUS Act and similar international efforts aim to establish clear rules for issuance, custody, and usage, unlocking broader institutional and corporate adoption. These developments position stablecoins not just as trading tools but as strategic financial infrastructure – supporting corporate treasury operations, cross-border settlements, and programmable payments. As regulatory frameworks solidify, stablecoins are increasingly becoming the connective layer between traditional finance and the blockchain economy.

5. **Tokenized RWAs Move Beyond Issuance to Secondary Markets**: The tokenized RWA market is expected to evolve from static issuance to active secondary trading in H2 2025. Watch for institutional-grade tokenized products – like credit notes, funds, or treasuries – gaining real 24/7 liquidity on-chain instead of sitting idle or only serving as collateral. This shift should test settlement and compliance workflows for regulated assets crossing between permissioned and permissionless venues. If secondary liquidity does materialize at scale, it could unlock new yield sources for DeFi, change the profile of stablecoin collateral, and challenge traditional brokers and fund administrators that can't match instant settlement. The real adoption test will be whether buyers and sellers beyond crypto-native funds step in to make these markets efficient enough to compete with off-chain alternatives.

6. **BTCFi Pushes Toward Usable Collateral at Scale**: Bitcoin's dominance this cycle has driven huge passive accumulation through ETFs and self-custody, but the next phase will test whether that idle capital becomes usable collateral at scale. More conservative BTC-backed lending, stablecoin issuance, and hedging markets may emerge as protocols push to make Bitcoin more than just a 'store and hold' asset. The real catalyst will be practical integrations with L2s and cross-chain modules that reduce friction and custody risk. Any meaningful growth will likely focus on simple, yield-generating strategies that suit large holders and institutional flows. BTCFi's evolution into genuine collateral will hinge on proving that demand for borrowing and leverage is strong enough to activate these balances without fragmenting liquidity or over-relying on traditional wrapped models.

7. **Rollup Maturation and ETH Value Chain**: Years after early growth, rollups now face scrutiny as the sector shows mixed progress on credible decentralization and trust assumptions. This comes alongside a broader debate about how well rollup activity ultimately supports Ethereum's value chain and security model. While some networks have advanced fraud or validity proofs, light clients, and sequencing design under Ethereum's decentralization framework, many still have work to do.

   At the same time, the crowded L2 market is showing early signs of consolidation as purely incentive-driven models from past cycles struggle to sustain usage and and valuations slip back toward pre-launch levels. This underscores that real product–market fit and sustainable fee generation matter more than aggressive rewards alone. Rollups able to build durable usage, stronger guarantees, and clear alignment with Ethereum's value chain will be better positioned as the ecosystem matures. The coming period will test which networks can balance growth, credible trust minimization, and integration into Ethereum's long-term scaling roadmap.

8. **AI-powered Crypto Integrations:** The integration of artificial intelligence into the crypto space, particularly within decentralized finance (DeFi), is advancing rapidly. Since January 2025, AI-related on-chain activity has surged by 131%, driven in large part by developers who are abstracting complex AI technologies behind the scenes to create more convenient and user-friendly decentralized applications (dApps).

   As a result, approximately 4.42M daily users now engage with AI-powered DApps, benefiting from seamless, intelligent financial services without needing deep

technical knowledge. This growing adoption is supported by a notable increase in investment, with funding for AI agent projects reaching US$1.39B in the first half of 2025 – a 9.4% rise compared to 2024. These developments demonstrate how AI is being effectively integrated into DeFi, enhancing usability and accessibility while driving broader participation.

9. **Prediction Markets as Global Information Layer**: The ultimate Total Addressable Market (TAM) for prediction markets is not betting, but the information market itself. While current user behavior often resembles wagering, leaders like Polymarket are strategically positioning themselves as "News 2.0," alongside emerging enterprise use cases, all pointing to a more profound goal: to become the premier source for real-time, probabilistic information on any future event.

   The scale of this market is orders of magnitude larger than traditional sports betting or gambling, encompassing finance, insurance, corporate strategy, and public policy. The valuations of platforms such as Polymarket and Kalshi are not predicated on their potential to be better sportsbooks, but on their potential to become a new infrastructure layer for the global information economy. We believe the prediction market sector is evolving in several key directions that will define its next phase of growth:

   i. **Shift Toward Enterprise-Grade Forecasting**: As platforms mature and their predictive accuracy is further validated, their applications are poised to expand from retail users to enterprise clients. Corporations could leverage these platforms for internal forecasting, risk management, and data aggregation to make more informed strategic decisions.

   ii. **Deeper DeFi Integration**: The composability of outcome tokens offers limitless possibilities for integration with the broader DeFi ecosystem. In the future, these tokens could be used as collateral in lending protocols, to build structured financial products based on predicted outcomes, or to integrate with the growing Real-World Asset (RWA) narrative.

   iii. **The Future of Social-Financial (SoFi) Media**: The Polymarket-X partnership is a prototype for a new hybrid of social and financial media. Its success could pioneer a trend where other social platforms integrate similar functionalities, making prediction markets a standard feature of "Web3" social media.

   iv. **Convergence with AI**: Using AI like Grok to analyze and interpret markets is just the beginning. Future prediction markets will likely integrate more advanced AI and data analytics to provide users with deeper insights and potentially power autonomous trading agents.

10. **Altcoin Rotation Yet to Unfold**: The current post-halving cycle has diverged from historical patterns. While Bitcoin has significantly outperformed since the April 2024 halving, altcoins have lagged behind, delaying the onset of a typical altseason. As of June 2025, Bitcoin dominance remains elevated (~65%), contrasting with previous cycles where dominance sharply declined in the year following the halving.

Historically, altcoin rallies have emerged after Bitcoin enters consolidation, as capital rotates in search of higher returns. However, several structural factors may be tempering this dynamic in the current cycle. Chief among them is the oversupply of new tokens across chains, which may dilute capital inflows and limit broad-based upside across the altcoin market.

Additionally, prior altcoin cycles were driven by clear, crypto-native innovation cycles – ICOs (2017) and DeFi/L2s (2021). In contrast, current narratives such as memecoins, BitcoinFi, and DePIN are largely iterative. While AI garners cross-sector attention, it has yet to yield significant on-chain utility or capital formation.

Without a compelling new catalyst, altcoin performance may remain fragmented. A decisive thematic or technological breakthrough – or a policy shift that extends beyond Bitcoin – may be required to ignite a sustained rotation. Until then, capital could remain concentrated in Bitcoin and a select subset of high-conviction assets.

# 13 / References


1. https://farside.co.uk/btc/
2. https://fred.stlouisfed.org/
3. https://tradingeconomics.com/
4. https://www.policyuncertainty.com/
5. https://budgetlab.yale.edu/
6. https://www.bloomberg.com/news/articles/2025-06-04/cbo-says-republican-tax-bill-adds-2-4-trillion-to-us-deficits
7. https://budgetlab.yale.edu/research/state-us-tariffs-july-14-2025
8. https://sosovalue.com/assets/etf/us-btc-spot/
9. https://www.bloomberg.com/news/articles/2025-01-30/tesla-tsla-got-600-million-bitcoin-btc-boost-from-accounting-change/
10. https://www.coindesk.com/markets/2025/07/10/bitcoins-q2-boom-being-fueled-by-corporates-bitwise/
11. https://stacks.org/april-2025-town-hall/
12. https://blockworks.co/news/bitlayer-bridged-bitvm/
13. https://docs.gobob.xyz/learn/introduction/roadmap/
14. https://botanixlabs.com/blog/botanix-launches-mainnet-to-power-the-bitcoin-economy/
15. https://www.blog.citrea.xyz/countdown-to-citrea-mainnet/
16. https://rootstock.io/roadmap/
17. https://defillama.com/chain/bitcoin/
18. https://www.blockchain.com/explorer/charts/difficulty
19. https://rootstock.io/blog/bitcoin-mining-2-0-foundry-now-merge-mines-rootstock/
20. http://domo-2.gitbook.io/brc-20-experiment/
21. https://sosovalue.com/assets/etf/us-eth-spot/
22. https://www.sec.gov/newsroom/speeches-statements/statement-certain-protocol-staking-activities-052925/
23. https://cointelegraph.com/news/sec-delays-ether-staking-xrp-etfs-expected-analyst/
24. https://investors.sharplink.com/sharplink-gaming-expands-eth-treasury-holdings-to-188478/
25. https://www.btcs.com/news-media/additional-eth-purchase-june-20-2025/
26. https://ethereum.org/en/roadmap/pectra/
27. https://x.com/VitalikButerin/status/1895863075527700959/
28. https://ultrasound.money/
29. https://blog.arbitrum.io/robinhood-is-realizing-the-crypto-vision/
30. https://www.starknet.io/blog/sn-stack-announcement/
31. https://www.theblock.co/post/301706/zksync-elastic-chain/
32. https://scroll.io/blog/stage-1-confirmed/
33. https://scroll.io/blog/euclid-upgrade/
34. https://forum.polygon.technology/t/sunsetting-polygon-zkevm-mainnet-beta-in-2026/21020/
35. https://www.growthepie.com/fundamentals/profit/
36. https://l2beat.com/
37. https://www.coindesk.com/tech/2025/02/10/uniswap-labs-officially-launches-layer-2-unichain/
38. https://docs.optimism.io/interop/explainer/
39. https://app.artemisanalytics.com/chains

40. https://defillama.com/chain/solana/
41. https://world.helium.com/en/network/mobile/stats/
42. https://hivemapper.com/coverage/
43. https://x.com/phantom/status/1880018921585275133/
44. https://solanamobile.com/seeker/
45. https://www.theblock.co/post/347866/polymarket-launches-on-solana-to-enable-sol-deposits-expanding-beyond-usdc/
46. https://www.theblock.co/post/355597/kalshi-now-accepts-solana-after-adding-support-for-bitcoin-usdc-and-wld/
47. https://www.reuters.com/business/finance/societe-generale-launch-dollar-pegged-stablecoin-2025-06-10/
48. https://x.com/EricBalchunas/status/1932527239679095097/
49. https://www.globenewswire.com/news-release/2025/06/12/3098262/0/en/DeFi-Development-Corp-Announces-5-Billion-Equity-Line-of-Credit.html
50. https://www.chaincatcher.com/en/article/2190296/
51. https://solanacompass.com/projects/firedancer
52. https://www.bnbchain.org/en/programs/
53. https://bscscan.com/charts/
54. https://defillama.com/protocol/pancakeswap/
55. https://defillama.com/chain/bsc/
56. https://www.bnbchain.org/en/blog/move-your-stablecoins-for-free-0-fee-carnival-for-usd1-and-usdt-transfers-extended/
57. https://www.21shares.com/en-uk/research/newsletter-issue-261/
58. https://www.bnbchain.org/en/martians-program
59. https://www.bnbchain.org/en/hackvolution/
60. https://www.bnbchain.org/en/blog/bnb-ai-hack-hack-the-future-of-ai-on-bnb-chain/
61. https://x.com/JasonYanowitz/status/1933945654998684051/
62. https://messari.io/copilot/share/exploring-tst-memecoin-4a55591e-8774-4f80-bb9a-ba1dd8cde74b/
63. https://www.bnbchain.org/en/blog/bnb-chain-launches-exclusive-incentive-program-for-real-world-asset-rwa-projects/
64. https://www.bnbchain.org/en/blog/bnb-chain-tech-roadmap-2025/
65. https://x.com/BNBCHAIN/status/1895791200462045239/
66. https://www.bnbchain.org/en/blog/bnb-good-will-alliance/
67. https://www.bnbchain.org/en/blog/how-the-goodwill-alliance-slashed-sandwich-attacks-by-95/
68. https://www.bnbchain.org/en/bnb-staking/
69. https://opbnbscan.com/
70. https://www.bnbchain.org/en/blog/2024-annual-report-on-bnb-chain/
71. https://greenfieldscan.com/
72. https://www.bnbchain.org/en/blog/bnb-chain-tech-roadmap-2025/
73. https://subnets.avax.network/
74. https://www.coindesk.com/tech/2025/05/22/fifa-teams-up-with-avalanche-to-build-its-own-blockchain-expanding-web3-ambition/
75. https://app.rwa.xyz/networks/avalanche/
76. https://www.avax.network/about/blog/pixelmon-joins-avalanche-to-fuel-next-wave-of-mobile-web3-gaming/
77. https://defillama.com/chain/sui/
78. https://blog.sui.io/lineup-games-telegram-line-striker-league/

79. https://thedefiant.io/news/press-releases/space-and-time-integrates-blockchain-data-with-microsoft-fabric-featuring-bitcoin-sui-and-ethereum/
80. https://defillama.com/chain/tron/
81. https://coinlaw.io/tron-statistics/
82. https://www.reuters.com/technology/crypto-group-tron-go-public-us-via-reverse-merger-with-srm-2025-06-16/
83. https://defillama.com/chain/cardano/
84. https://roadmap.cardano.org/en/
85. https://blog.ton.org/ton-telegram-exclusive-partnership-2025/
86. https://cointelegraph.com/news/telegram-ton-wallet-mandate-crypto-mini-apps/
87. https://app.artemisanalytics.com/asset/ton/
88. https://blog.ton.org/ton-layer-zero/
89. https://blog.ton.org/ton-retires-toncoin-bridge/
90. https://ton.org/en/roadmap/
91. https://blog.ton.org/libre-ton-foundation-500m-telegram-bond-fund-tbf/
92. https://finance.yahoo.com/news/ton-jumps-foundation-says-vc-152620591.html/
93. https://www.coindesk.com/business/2025/07/03/the-open-platform-becomes-first-ton-unicorn-following-285m-raise/
94. https://www.stablecoin.fyi/#stablecoin-payments-by-token
95. https://coinpedia.org/research-report/stablecoin-performace-research-report/#:~:text=Stablecoin%20Top%20Chain%20%28,Fraxtal%20%2832.85
96. https://www.ainvest.com/news/tether-boosts-treasury-holdings-3-1-q1-2025-2505/
97. https://cointelegraph.com/news/tether-us-treasury-holdings-surpass-germany-q1-2025
98. https://dappradar.com/blog/ai-agents-become-a-top-web3-investment-with-1-39b-raised
99. https://www.researchandmarkets.com/reports/6007585/ai-agents-market-agent-role-productivity-and
100. https://www.peaq.xyz/blog/what-is-depai
101. https://www.figure.ai/news/helix
102. https://www.polarismarketresearch.com/industry-analysis/future-of-robotics-market
103. https://www.morganstanley.com/insights/articles/humanoid-robot-market-5-trillion-by-2050
104. https://onchain.org/magazine/humanoid-robots-chatgpt-moment-is-web3-the-missing-link/
105. https://xmaquina.gitbook.io/xmaquina
106. https://www.peaq.xyz/learn/vision
107. https://www.peaq.xyz/blog/layerzero-integrates-peaq
108. https://transmedcomms.biomedcentral.com/articles/10.1186/s41231-019-0050-7
109. https://www.vitadao.com/vitalabs
110. https://www.bio.xyz/
111. https://www.molecule.to/
112. https://github.com/labdao
113. https://www.coinbase.com/en-gb/blog/the-state-of-crypto-the-future-of-money-is-here
114. https://www.coinbase.com/en-gb/blog/rising-allocations-broadening-use-cases-new-research-from-EY-parthenon-and-Coinbase
115. https://www.cnbc.com/2025/06/17/jpmorgan-stablecoin-jpmd.html

116. https://blog.ondo.finance/ondo-finance-brings-tokenized-real-world-assets-to-mastercards-multi-token-network/
117. https://www.coindesk.com/markets/2025/04/30/tokenized-apollo-credit-fund-makes-defi-debut-with-levered-yield-strategy-by-securitize-gauntlet
118. https://polygon.technology/blog/jio-platforms-ltd-is-collaborating-with-polygon-labs-to-bring-web3-capabilities-to-450-million-jio-users
119. https://www.sc.com/en/press-release/trade-finance-to-play-substantial-role-in-usd-30-1-trillion-tokenised-real-world-assets-market-by-2034/
120. https://www.dsgpay.com/blog/transfer-millions-of-dollars-internationally/
121. https://remittanceprices.worldbank.org/
122. https://cointelegraph.com/news/crypto-cards-outpace-banks-europe-small-payments
123. https://www.mastercard.com/us/en/news-and-trends/press/2025/june/mastercard-chainlink-crypto.html
124. https://www.mastercard.com/us/en/news-and-trends/stories/2025/mastercard-stablecoin-utility-and-scale.html
125. https://privy.io/blog/announcing-our-acquisition-by-stripe
126. https://www.shopify.com/news/stablecoins-on-shopify
127. https://www.prnewswire.com/news-releases/aeon-partners-with-stellar-to-expand-web3-mobile-payments-across-southeast-asia-and-beyond-302431564.html
128. https://yellowcard.io/blog/yellow-card-partners-with-visa/
129. https://usa.visa.com/about-visa/newsroom/press-releases.releaseId.21371.html
130. https://www.wsj.com/finance/banking/walmart-amazon-stablecoin-07de2fdd
131. https://block.xyz/inside/block-to-roll-out-bitcoin-payments-on-square
132. https://www.bloomberg.com/news/articles/2025-04-14/jpmorgan-s-blockchain-payments-network-adds-support-for-pound
133. https://www.reuters.com/business/crypto-exchange-kraken-debuts-peer-to-peer-payments-app-krak-2025-06-26/
134. https://www.whitehouse.gov/presidential-actions/2025/01/strengthening-american-leadership-in-digital-financial-technology/
135. https://www.fsc.go.kr/eng/pr010101/81217
136. https://www.expattaxthailand.com/tax-alert-thailand-announces-5-year-crypto-tax-break/

# 14 / New Binance Research Reports

**Monthly Market Insights - July 2025 Link**
A summary of the most important market developments, interesting charts and upcoming events


**Navigating Crypto: Industry Map Link**
An overview of different verticals in crypto

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Binance Research is the research arm of Binance, the world's leading cryptocurrency exchange. The team is committed to delivering objective, independent, and comprehensive analysis and aims to be the thought leader in the crypto space. Our analysts publish insightful thought pieces regularly on topics related but not limited to, the crypto ecosystem, blockchain technologies, and the latest market themes.

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# Resources

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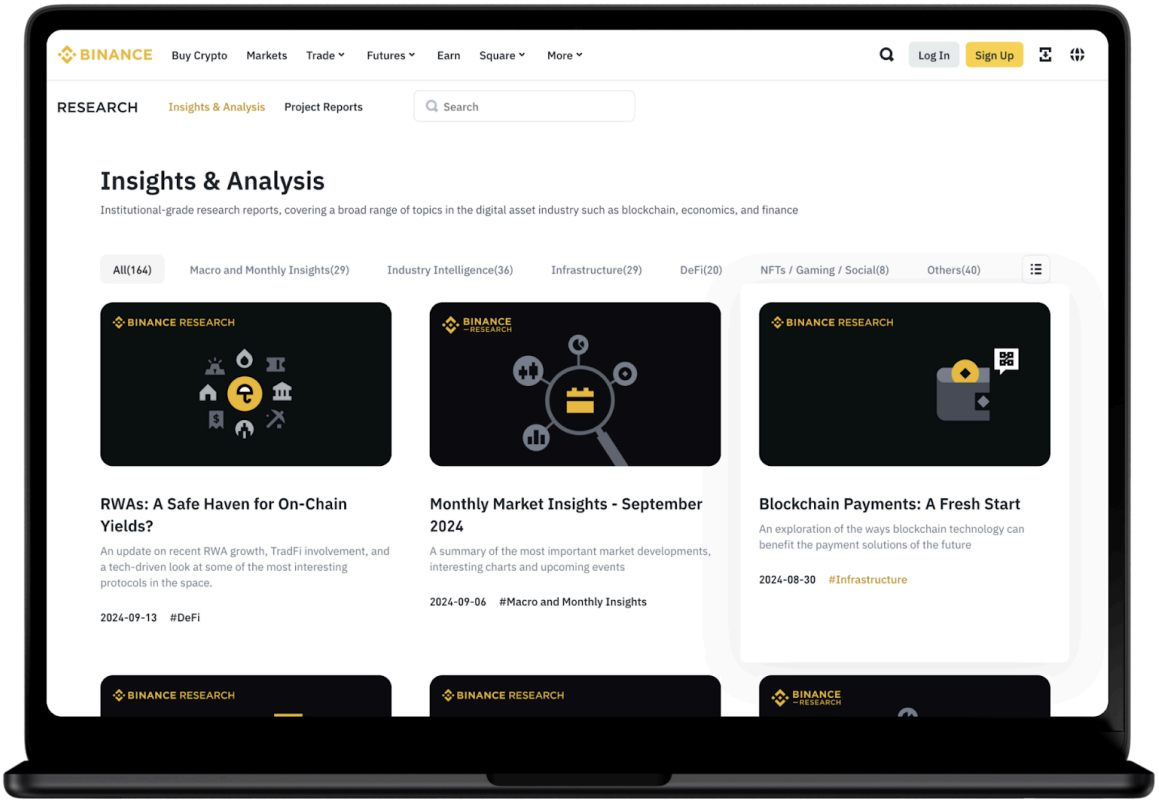


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