

The background of the entire image is a dark, textured surface composed of numerous black hexagons. Superimposed on this background are four glowing, translucent arcs. The top arc is a bright lime green. The bottom arc is a bright cyan. The left arc is a medium green. The right arc is a medium blue. These arcs overlap and curve across the center of the image, suggesting a sense of motion or connectivity.

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BY FIDELITY DIGITAL ASSETS® RESEARCH

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Flat Prices, Sharp Shifts: How Digital Assets are Retooling Industries

INTRODUCTION BY CHRIS KUIPER, CFA

In the [2025 Look Ahead](#), the Fidelity Digital Assets® Research team addressed a question on many investors' minds: "Am I too late?" That sentiment was shaped by 2024's strong gains and waves of acceleration. Now, following a lackluster year-end, the question weighing on investors may have shifted to: "What is happening?"

2025 appeared to be positioned for a record-setting run supported by strong fundamentals, unprecedented exchange-traded product (ETP) and fund flows, a clearer regulatory environment, and historical cyclical bull patterns seemingly on track with multiple new all-time highs. However, despite periods of strong momentum throughout the year, bitcoin and the broader digital assets market ended 2025 virtually flat.

As investors, we often look toward historical analogies to help illuminate the current path. One that has recently been on the Research team's mind is the story behind the shipping container. In *The Box*, author Marc Levinson details how a seemingly obvious cost-saving invention—a rectangular steel container—took decades of struggle before achieving widespread adoption.

Although some have compared the shipping container to blocks in a blockchain on a technical level (each carrying information or data), the analogy may run much deeper.

The shipping container dramatically reduced logistics costs and shipping times, reworking global trade and creating entirely new industries.

It reduced loading costs by 95% or more, cutting the time required to load a ship from a week to mere hours with fewer laborers. Loading costs also plunged from over \$5 per ton to just pennies.

However, it took decades for the world to see that the shipping container would work and could be trusted. The update called for significant infrastructure changes: new cranes, trained operators, retrofitted ships, rail cars, and trucks, plus the relocation of ports and factories. This retooling required years, and most did not recognize the transformation as it unfolded.

The digital assets industry may similarly appear to be in a "trough of disillusionment," with many still unconvinced or outright skeptical. However, much like the early days of the shipping container, there are signs of businesses starting to "retool" for the new digital assets industry.

In 2025, a number of major traditional banks, brokerages, and financial institutions announced or launched a digital asset strategy or capability. Traditional payment providers also moved beyond experimentation, with reports of a \$2 billion acquisition by one key player signaling a deeper commitment to the space.¹

The growth of stablecoins and tokenization continues unabated, with major companies steadily integrating these capabilities. Reshaping is occurring at the government level, as 2025 began with an executive order on digital assets followed by the first crypto-specific American regulation passing, European frameworks becoming operational, and even a U.S. state establishing a strategic bitcoin reserve.²

Institutional adoption also advanced as large investor segments increased allocations or expressed growing interest. Notably, many with the largest hurdles to adoption are now participating: pensions, endowments, sovereign wealth funds, and even a central bank.

Realizing the full potential of digital assets will likely take years, even decades. Although it may seem that the significant capital invested in the space has not translated into obvious change, beneath the surface, established industries are redefining how financial assets are valued, transferred, and safeguarded.

The following is a collection of insights from the Fidelity Digital Assets Research team on what we anticipate for 2026. We first examine the continued convergence of digital assets and capital markets, followed by the emergence of new token holder rights. We explore the potential impact of digital asset treasury (DAT) companies and artificial intelligence (AI) on the market, the latest bitcoin community concerns regarding forks and quantum computing, and conclude with our macro outlook.

The Convergence of Digital Assets and Capital Markets

BY MARTHA REYES

Bitcoin has evolved into a rapidly institutionalizing ecosystem since first launching as a speculative experiment—echoing the trajectory of equities and other assets, but at a compressed pace. Just as the Amsterdam Stock Exchange unified fragmented share trading and post-1929 regulation improved institutional confidence, digital assets have shifted from informal forums to regulated exchanges, robust custody solutions, and sophisticated financial instruments.

The rise of digital asset ETPs, regulated futures and options, and institutional lending may signal a new era where digital assets function as a full-stack asset class, integrating across infrastructure and products, including ETPs, derivatives, and trading venues. These developments enable capital efficiency, risk management, cross-margining, and structured strategies that can unlock deeper capital pools. Unlike equities, which matured over decades, blockchain-based assets appear to be accelerating at a faster pace driven by programmable settlement, 24/7 liquidity, and borderless infrastructure.

The integration of blockchain technology into capital markets may deepen with more investment vehicles as it did with equities and eventually through tokenization of traditional assets. As institutional adoption grows, digital assets could also become a core component of portfolio construction. With more demand for leverage, hedging, and yield generation, new opportunities may arise as well as some risks.

This shift toward institutionalization reflects a broader trend across all digital assets. However, it does appear to contradict Bitcoin's original ethos as a decentralized, censorship-resistant payment network backed by a scarce monetary good, one that does not need or rely on financial intermediaries.

Financialization has introduced both intermediation and synthetic leveraged exposure, features that appeal to institutional investors but can also amplify volatility and often bypass on-chain activity.

Nevertheless, bitcoin's hard supply cap of 21 million is still enforced at the protocol layer, anchoring its scarcity much like gold but more easily verifiable. Investors always have the option to self-custody and conduct peer-to-peer transactions.

Although long-term miner fee dynamics remain uncertain, Bitcoin appears poised to accelerate its evolution into a widely accepted and integrated financial asset—supported by the growing development of financial products and infrastructure around it. This increasing integration could further position Bitcoin for recognition as a reserve asset, given its properties of scarcity, verifiability, and transparency, which allow clear visibility into where holdings sit within the network.

From Speculation to Structure: Parallels with the Institutionalization of Equities

Tradable equities originated with 17th-century joint-stock companies, which issued shares to finance overseas trade. These shares enabled risk sharing, capital aggregation, and the potential for asymmetric returns. The advent of the Amsterdam Stock Exchange was transformative as it created liquidity through a secondary market. Exchanges emerged in other countries later on and shares were originally traded on fragmented, informal venues, resulting in illiquidity and poor price discovery.

In contrast, blockchains began as networks enabling peer-to-peer transactions without intermediaries. But even Bitcoin's pseudonymous creator envisioned a future exchange site to match buyers and sellers.³ As retail interest picked up, digital asset exchanges proliferated. Yet today, liquidity remains fragmented, and pricing and risk management lack industry-wide standardization.

From speculative beginnings, equities evolved into a cornerstone of finance. Participation broadened over time, but institutional investors such as banks, insurance companies, and pension funds only became active in the late 19th and early 20th centuries.

Institutionalization accelerated with the growth of pension and mutual funds.⁴ This led to the emergence of derivatives in the 1970s, enabling institutions to better manage risk and develop structured investment strategies.

Digital assets have followed a similar arc. The early years were dominated by retail speculation and fragmented, unregulated venues lacking robust infrastructure for custody, settlement, and hedging. Today, the emergence of regulated custodians, ETPs, futures, options, and evolving regulatory frameworks echo the equity market's path toward institutionalization.

Derivatives: Origins and their Growing Role in Digital Assets

In 1973, the Chicago Board Options Exchange (CBOE) introduced equities options, followed by futures in the 1980s. On the first day, approximately 1,000 contracts traded on individual stocks.⁵ By 2025, the daily average volume of equity futures and options cleared by the OCC reached 61.5 million contracts.⁶ In 2024, notional options flow exceeded \$3 trillion, over five times the daily turnover of underlying stocks and ETFs.⁷

In the case of digital assets, volatility (even as it declines) makes hedging important to institutions. In 2025, spot bitcoin's one-year annualized volatility ranged between 40–50%. During October 2025's drawdown, bitcoin options achieved record highs in open interest and volumes. Even if volatility continues falling over time, capital efficiency or short-term trading can be drivers for the continued growth of derivatives.

Perpetual futures have been the vehicle of choice for investors, dwarfing spot volumes, as they provide continuous, leveraged exposure without rolling over expiring contracts or physical delivery.

Bitcoin Perpetual Futures Open Interest: All Exchanges



Source: Fidelity Digital Assets® Research via Glassnode, accessed 12/14/25.

Meanwhile, CME BTC futures have become an effective proxy for institutional activity, with open interest reaching \$11.3 billion.⁸ Unlike perpetuals, these are traditional instruments with largely fixed maturities, accessible to institutions and professional investors. They are cash-settled, cleared through financial institutions, and are integrated seamlessly into existing systems. A significant share of exposure has historically been hedge funds going long spot or ETPs and shorting futures to capture premiums.

CME futures open interest now rivals leading native exchange Binance, though turnover, which is critical for institutions trading in size, remains well below that of perpetuals.^{9,10} The introduction of spot-quoted futures that can be held up to five years without rolling and 24/7 trading will better align CME products with the digital assets ecosystem, attracting more participants.

By comparison, average gold futures open interest on the CME in November 2025 was \$196 billion, with an average traded volume of \$128 billion.¹¹ Notional gold futures open interest equals approximately 0.7% of gold's market cap, akin to bitcoin futures on the CME.

While perpetual futures allow traders to take a directional view or conduct trades such as cash and carry, options are used for speculation, as well as specific hedging, yield, and volatility strategies. In equities, options activity is elevated given their popularity with institutions and retail investors. Bitcoin options may also eventually surpass spot volumes. During October 2025's volatility spike, BTC options volumes

hit record highs, with open interest exceeding \$60 billion—most of it on offshore exchange Deribit—surpassing open interest on perpetual futures.^{12,13}

Bitcoin Options Volume: All Exchanges



Source: Fidelity Digital Assets® Research via Glassnode, accessed 12/14/25.

The Role of ETPs

The U.S. spot digital asset ETPs launched in January 2024 and grew to \$124 billion in assets under management as of early December 2025, with institutional participation representing approximately 25% of the total by Q2 2025.¹⁴ These ETPs offer a convenient, traditionally regulated way to access the digital assets space.

ETP options have also become a major segment of the broader options market, gaining traction since the early 2000s. Similar to other asset classes, bitcoin ETP options are popular with investors. This trend was evident during the autumn 2025 selloff when trading activity surged, put volumes reached record highs, and open interest climbed to \$40 billion.^{15,16} In December 2025, Nasdaq filed to increase the options position limits on the largest bitcoin ETP from 250,000 to one million contracts, unlocking additional liquidity.

Banks are increasingly offering lending solutions to institutions and high-net-worth clients using ETPs as collateral, leveraging regulated exchanges and traditional clearing systems. Structured products are also emerging, and institutional lending on direct BTC and ETH holdings is expanding, with Cantor Fitzgerald earmarking \$2 billion and other major banks announcing their own plans.^{17,18} For regulated derivatives exchanges, the U.S. Commodity Futures Trading Commission (CFTC) launched a pilot program that enables the use of bitcoin and ether as collateral.

Digital assets are becoming a structural component of the financial system. The key questions now are how quickly and to what degree this convergence will occur. Much of this evolution is already happening behind the scenes—through regulated products, custody solutions, and institutional strategies—even if headline price movements remain muted. If history is any guide, institutions will drive this evolution, expanding synthetic exposure without diminishing bitcoin's appeal as a reserve asset—a role we anticipate strengthening over time.

The Year Token Holder Rights Go Mainstream

BY MAX WADINGTON

The Fidelity Digital Assets Research team believes 2026 will be the year token holder rights become a primary design variable rather than an afterthought.

In previous cycles, most tokens provided exposure to a story rather than cash flows or enforceable rights. Protocols generated fees and built treasuries, while token holders often had no direct or indirect claim on revenue, no mechanism to return capital if core teams stopped building, and no link between project performance and token issuance.

These structural dislocations created a rift between the underlying business and the value of the token, often making the space extremely difficult to navigate. For institutional allocators accustomed to underwriting explicit claims on cash flows, that disconnect has been a central reason to treat tokens as trading cards rather than durable positions.

The Buyback Foot in The Door of Token Holder Rights

The disconnects between underlying businesses and their tokens are starting to close through a simple but powerful mechanism: revenue-funded token buybacks.

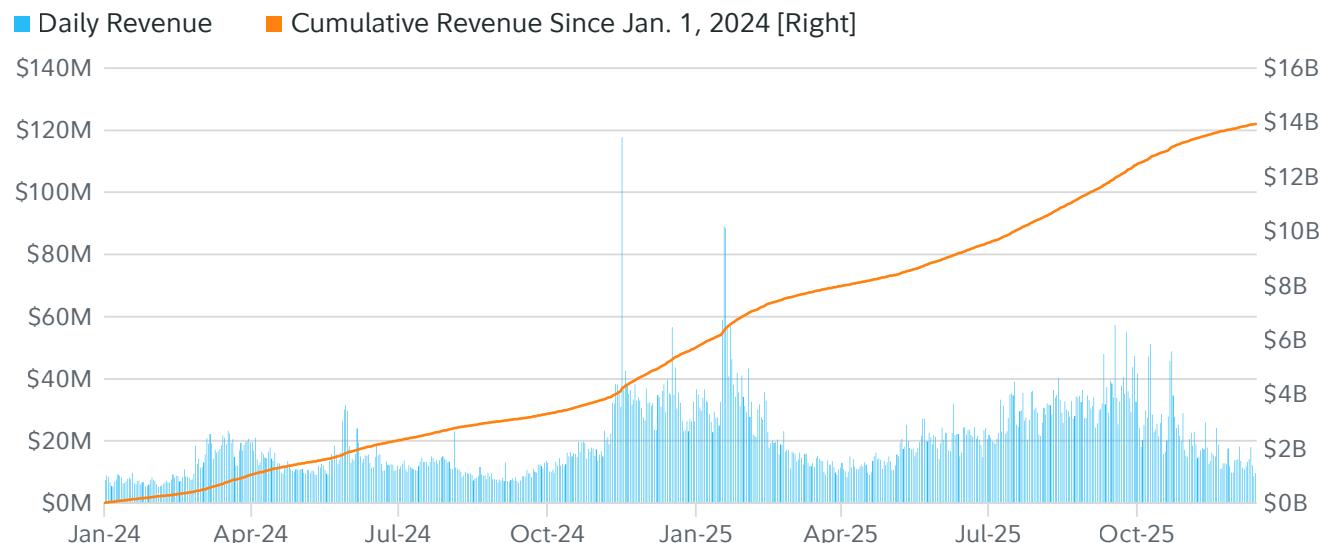
Hyperliquid stands out as the clearest reference point, and arguably the driving force, behind the emergence of token holder rights. Hyperliquid channels its trading revenue (earned from both derivatives and spot markets) into an automated system that buys back its native token. This creates a transparent link between exchange volume and token demand. Currently, 93% of all trading revenue is directed to this buyback engine, which has totaled more than \$830 million over the past 12 months.¹⁹

Pump.fun adopted a similar model shortly after Hyperliquid, using launchpad revenues to repurchase its token on the open market, amounting to \$208 million since July 2025.¹⁹ These two applications, among the most popular in digital assets over the past year, have drawn significant attention—prompting established DeFi players to converge on the same trend. A key driving factor appears to be the reduced regulatory risk associated with this structure.

For instance, Uniswap governance is moving toward allocating a portion of protocol and L2 fees to UNI buybacks, citing regulatory developments and token holder priorities as motivations.²⁰ Aave has already introduced a recurring buyback program funded by excess cash.²¹ In each case, these blue-chip DeFi applications have determined that a programmatic token buyback mechanism is beneficial for their token holders and are retroactively adjusting token design to prioritize this cohort.

“Fees Generated by Applications with Buyback Programs” illustrates fees generated by leading crypto-native applications that have implemented token buyback mechanisms. These applications span multiple sectors including trading, lending, and stablecoins, underlining that while many digital assets lack a direct link to the underlying business, the most successful fee-generating platforms have already taken steps to establish meaningful token holder rights.

Fees Generated by Applications with Buyback Programs



Source: Fidelity Digital Assets® Research via Blockworks Analytics, as of 12/15/25.

In our view, the market's response to this emerging buyback meta is clear: Tokens with credible ties to protocol revenue are increasingly viewed less as "governance chips" and more like early-stage, equity-adjacent claims on a business. We believe a greater share of total application fees will flow back to digital asset tokens in 2026.

The Token Holder Rights "Stack"

Buybacks represent the first step toward a comprehensive framework of token holder rights. As more leading protocols adopt value-accrual mechanisms, competition will increasingly center on the broader rights stack attached to a token. Although this stack includes many components, three areas are already emerging as the most clearly defined sources of value.

1. Fairer Primary Distributions (ICO 2.0)

The original ICO wave was fast but often inequitable, marked by insider allocations at steep discounts, opaque lockups, rigid supply caps, and large token cohorts with unclear purposes.

Next-generation token launches are likely to prioritize fairness by addressing these inefficiencies. Teams that can credibly assert "everyone plays by the same rules" will gain an advantage with both communities and institutions. These new constructs tend to be far simpler than current complex allocations. It is our view that simplicity fosters transparency, and transparency paves the way for greater capital flows.

2. Performance-Linked Vesting and Capital Return

Most token vesting today is time-based, regardless of whether the protocol gains traction. This structure forces token holders to absorb the risk of insider vesting without any guarantee of progress.

We anticipate that experiments with vesting schedules tied to clearly defined on-chain performance metrics, such as revenue or even token price, will gain traction. Underperformance could slow vesting, or businesses may remove the time component entirely, issuing token rewards only upon achieving measurable performance goals.

The core idea is simple and widely used in traditional businesses: Insiders are rewarded by delivering positive business outcomes, not simply by waiting out a clock.

3. Governance as an Investable Right

Today's default one-token-one-vote governance model gives token holders a voice but does not necessarily translate into meaningful influence. Holdings are often concentrated, and as a result, so are voting outcomes.

The next step is governance frameworks that treat decision quality as part of the rights package. That means eliminating the one-token-one-vote model and committing to a system that ensures decisions based on value creation. Futarchy, for example, is a notable model that allows the market to decide whether a proposal is expected to increase the value of the business or not, binding economic incentives with ongoing governance.

Although the most effective path forward remains uncertain, governance across digital asset businesses faces several inefficiencies. This offers an opportunity for projects with strong fundamentals to differentiate themselves.

Implications for Institutions and Base Layers

As these designs gain traction, the token market is likely split into two categories: rights-light and rights-rich assets. Rights-rich tokens incorporating a comprehensive framework (such as buybacks, fair primary distributions, performance-linked vesting, and robust governance) will occupy the upper end of the spectrum and are expected to command a significant premium over those with minimal rights.

Rights-light tokens will continue to exist as trading vehicles, but with limited institutional appeal. Rights-rich tokens will be easier to model, benchmark, and explain to investment committees. They support equity-like metrics such as payout ratios, earnings growth estimates, and scenario analysis based on protocol usage.

At the network level, this transition could concentrate economic activity around platforms that enable credible, rights-rich launches. In practice, Solana and Ethereum stand to benefit significantly from the surge in transaction volumes and sustained investment driven by emerging rights-rich token models.

Previous digital assets cycles demonstrated that tokens are powerful tools for bootstrapping networks, but they also exposed how fragile token value can be when holders lack real rights. The buyback trend is the first concrete response to this market deficiency. We expect 2026 may extend this logic into a more comprehensive rights framework, emphasizing fairer primary distributions, performance-linked vesting, and governance frameworks focused on value creation.

As those patterns spread, a subset of tokens will begin to resemble programmable, auditable claims on digital businesses, giving institutions a compelling reason to own them beyond beta. If the trend gains momentum, the market may see the first fully on-chain IPO featuring these token holder rights.

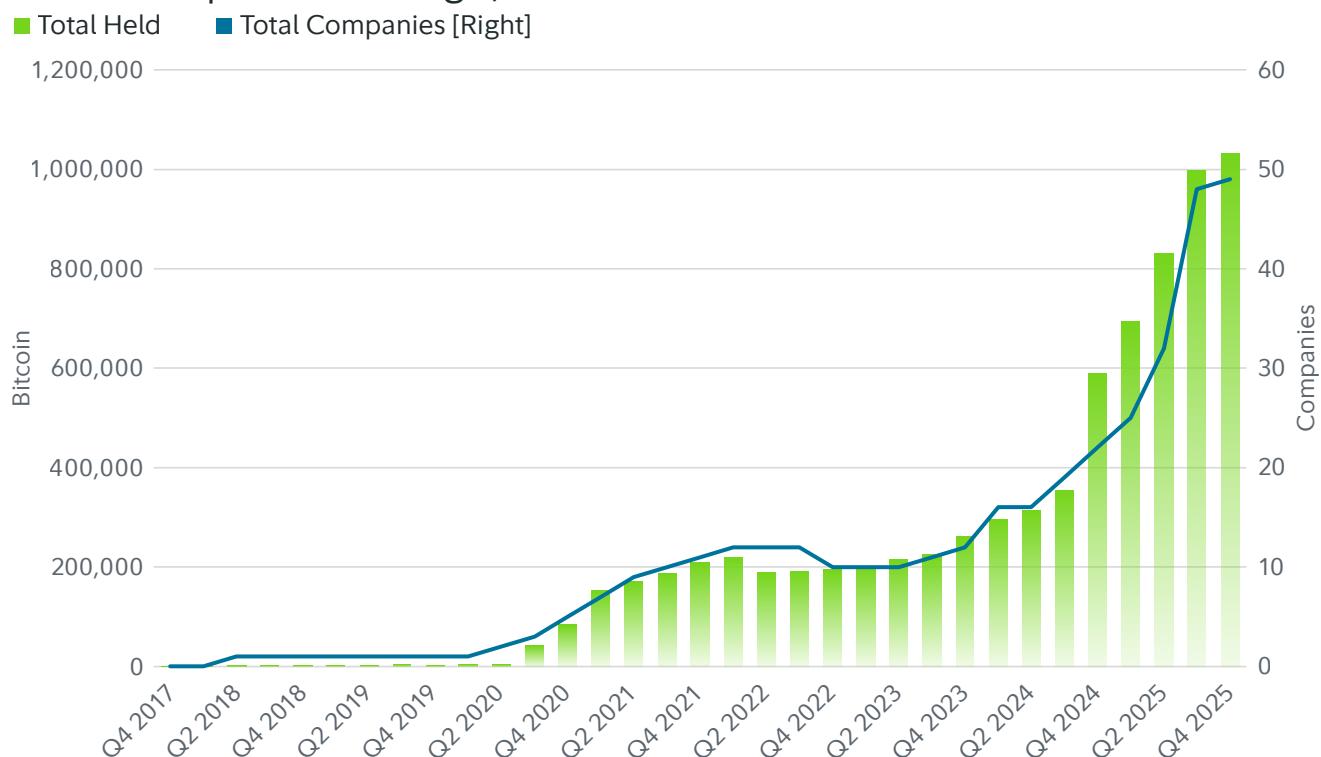
Bitcoin Treasury Company Landscape and the AI Impact

BY ZACK WAINWRIGHT

Breaking Down the Bitcoin Treasury Companies

There was a notable surge in public companies adding bitcoin to the balance sheet in 2025. At 2024's close, 22 companies held 1,000 or more bitcoin, having started to accumulate as early as Q4 2017. That total more than doubled to 49 by the end of 2025.

Public Companies Holding 1,000+ Bitcoin



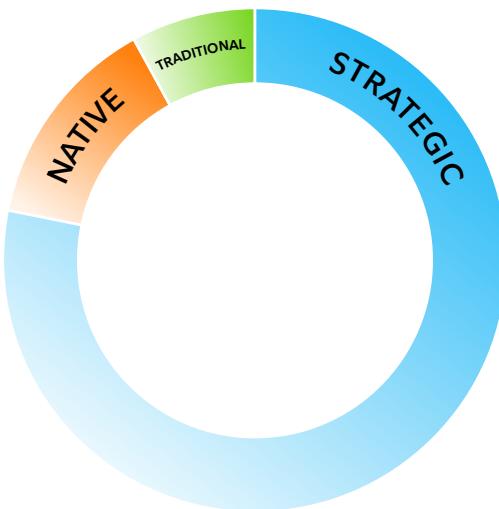
Source: Fidelity Digital Assets® Research via Public Company Filings & Announcements, 12/15/25.

Nearly 5% of the 21 million ever to exist is now held by a group of 49 companies. Each of these companies can be categorized into three distinct cohorts:

- **Native:** Companies native to the space that accumulated bitcoin organically through operations.
- **Strategic:** Companies that adopted a bitcoin-focused strategy with the main objective of accruing bitcoin.
- **Traditional:** Companies operating outside of the bitcoin ecosystem that have allocated a portion of earnings and/or corporate treasury to bitcoin.

Of these 49 companies, Fidelity Digital Assets Research has identified 18 as Native, 12 as Strategic, and 19 as Traditional.

Bitcoin Treasury Company Breakdown



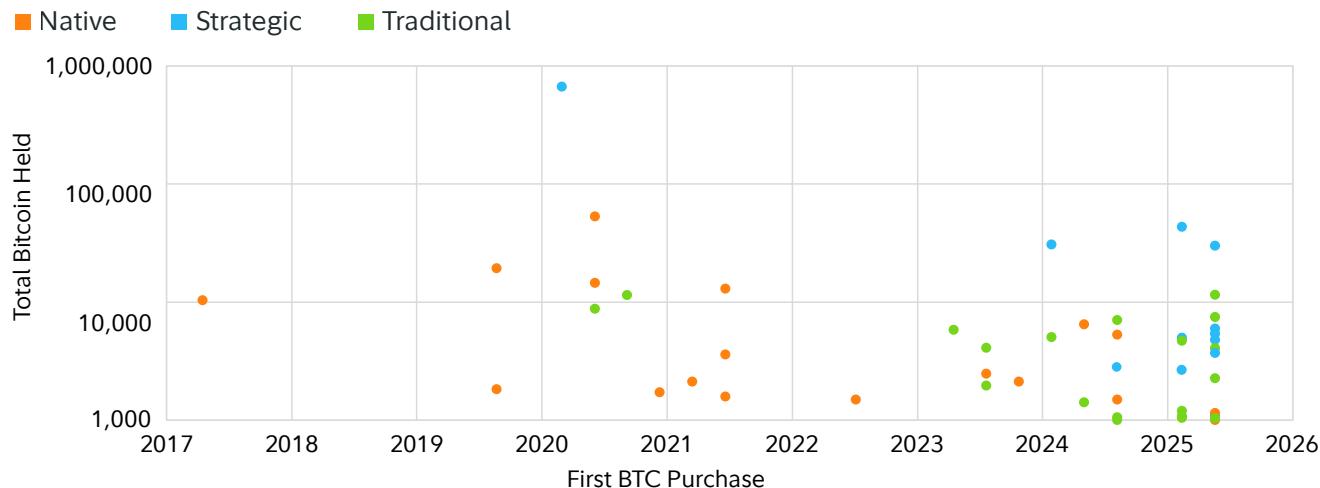
Source: Fidelity Digital Assets® Research via Public Company Filings & Announcements, 12/15/25.

Although fewer in number, the Strategic cohort holds nearly 80% of the bitcoin owned by these companies.

In fact, four of the five largest bitcoin holders fall into the Strategic category. Excluding the largest holder, the remaining 11 Strategic companies hold an average of 12,346 BTC each. This puts the Strategic group well ahead of the Native cohort (largely comprised of bitcoin mining companies), which averages 7,935 BTC, and the Traditional cohort, which averages 4,326 BTC.

On the chart "Bitcoin Treasury Company History," each data point represents a company with the date of their first acquisition on the x-axis and total bitcoin held on the y-axis.

Bitcoin Treasury Company History



Source: Fidelity Digital Assets® Research via Public Company Filings & Announcements, 12/15/25.

Several data points stand out at first glance, including the absence of new Native companies and the substantial bitcoin holdings among newly classified Strategic companies. The bitcoin strategy playbook has gained popularity over the past year, leading to the proliferation of both Strategic and Traditional companies joining the fold in a meaningful way.

We believe this trend will continue into 2026. **Strategic companies are likely to continue building bitcoin reserves, while more Traditional companies will make the leap into bitcoin.** The Native category, however, may further evolve. Many Native companies are bitcoin miners, and as they become increasingly involved with AI, competition for energy infrastructure could shift their focus away from pure bitcoin mining.

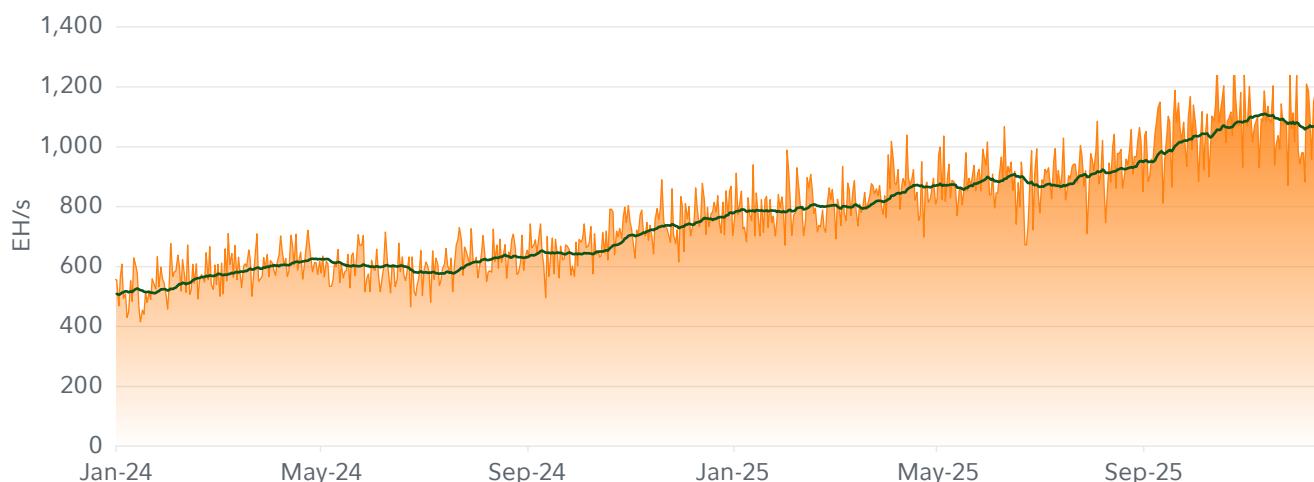
Flattening Hash Rate in 2026?

One key dynamic we will be monitoring in 2026 is whether hash rate begins to flatten due to increasing competition for finite energy infrastructure driven by AI. In 2025, Amazon Web Services signed a 15-year, \$5.5 billion lease agreement with Cipher Mining (CIFR), while Iren Limited (IREN) announced a \$9.7 billion cloud services contract with Microsoft (MSFT) to host AI workloads.^{22,23}

If mining companies continue leveraging existing infrastructure, priorities may shift away from bitcoin mining as AI offers more profitable economics. “The crossover point where Bitcoin mining matches AI hosting economics sits between \$60 and \$70 per petahash per day for a 20 joule-per-terahash fleet,” per CryptoSlate journalist Gino Matos.²³ This implies that for most miners operating 20–25 joule equipment, the hash price would need to rise 40–60% from current levels to match contracted GPU hosting profitability.²³

The AI data-hosting boom requires substantial energy resources, and bitcoin miners are uniquely situated to take on these projects immediately. This new revenue stream introduces something bitcoin miners have historically lacked: options. Previously, miners were dependent on bitcoin market cycles. Now, with a potential second source of revenue, these companies may become more resilient.

Bitcoin: Mean Hash Rate (30-Day MA)



Source: Fidelity Digital Assets® Research via Coin Metrics, 12/14/25.

However, there are several scenarios where the numbers could shift back in Bitcoin's favor. A sharp rise in bitcoin's price or transaction fees could boost mining profitability, and a significant drop in hash rate—driven by miners shifting to AI—could further improve economics. **Of these, we see the most likely outcome being a combination of higher bitcoin prices and a lower hash rate, allowing the mining market to naturally recalibrate.**

While a lower hash rate could potentially equate to a less secure Bitcoin, the emergence of AI hosting as a secondary revenue stream makes miners more resilient overall. As a result, the Bitcoin network could be

strengthened. Additionally, miners or mining equipment that were priced out due to intense competition may re-enter the market under a lower hash rate environment, potentially leading to a more decentralized mining landscape.

Larger players pivoting to AI, such as Cipher Mining (CIFR) or Iren Limited (IREN), may also sell excess mining equipment to smaller operators both domestically and abroad. **In 2026, we could see hash rate flattening as major miners halt expansion and possibly scale back operations in favor of more profitable AI hosting revenue.**

From Forks to Qubits: Bitcoin Comes to a Crossroads

BY DANIEL GRAY

The Rise of Knots

Although 2025 ended flat for investors, the same cannot be said within the developer community.

Numerous scaling projects and Bitcoin Improvement Proposals (BIPs), such as OP_CHECKTEMPLATEVERIFY (CTV) (BIP-119) and OP_CAT (BIP-420), are still awaiting a path forward.

Beyond these proposals, the Bitcoin Core development team sparked debate by announcing a change to a default policy setting in the upcoming Bitcoin Core version 30 release. The debate centers on an update, datacarriersize, a policy setting which directly determines how much data can be inserted into the OP_RETURN opcode.

The key takeaway is that OP RETURNS represent an unspendable output that nodes can prune from their hard drives, whereas UTXOs (Unspent Transaction Outputs) must be maintained to verify new transactions. OP_RETURN may be a safer or more efficient way to store arbitrary data on Bitcoin. **However, current incentives favor storing data in UTXOs via SegWit and Taproot addresses, which offer significant fee discounts.**

Historically, OP_RETURN has been limited to 80 bytes by a default policy rule. Larger OP_RETURN transactions are not limited by consensus but are limited by individual node policy, leading some services to allow users to submit “out of band” transactions that bypass the network’s collective mempool and the individual policy rule.

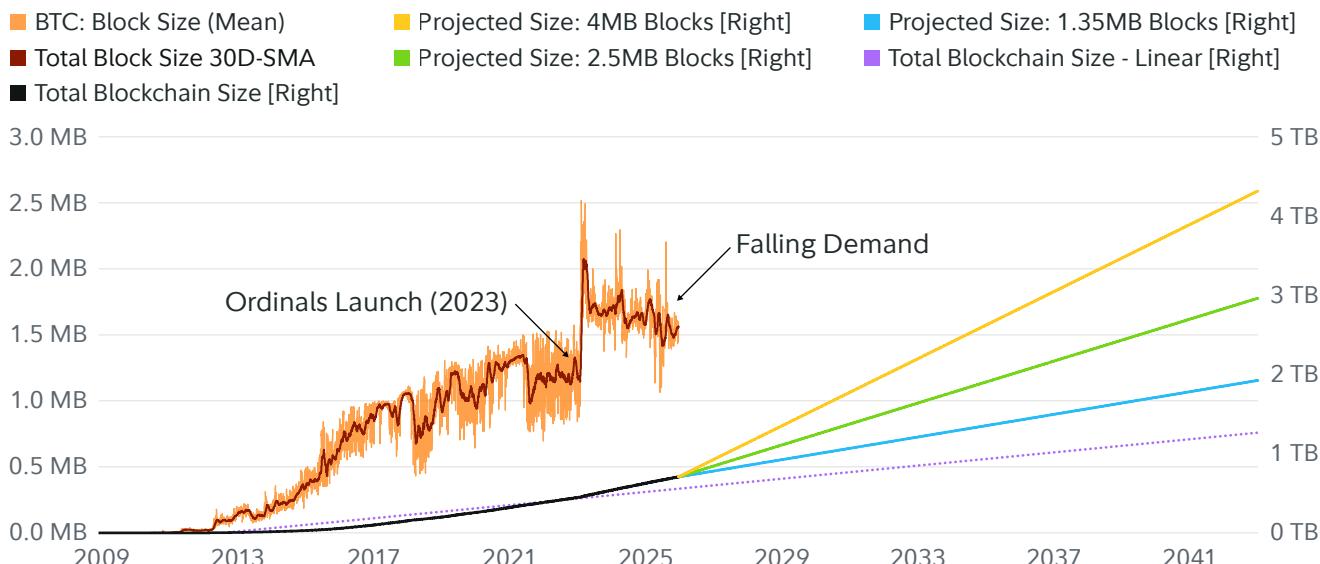
It is important to note that Bitcoin Core v30 does not change consensus for the block size. It remains limited to a total of 4 megabytes (4,000,000 bytes).

Evaluating the Spam Narrative

Using historical data, we examined the degree to which the spam-driven growth narrative is substantiated. While there was a noticeable acceleration in blockchain size following the launch of the Ordinals protocol in 2023, demand—and the resulting chain growth—has gradually been reverting toward historical norms.

The Fidelity Digital Assets Research team’s expectations for block space demand suggest a range of outcomes. If average block size remains around 1.35 megabytes, total blockchain size would reach under two terabytes by 2042. At the upper bound, assuming every block hits the four-megabyte limit, the chain could exceed four terabytes in as little as 16 years.

Bitcoin: Blockchain Data Size Projection



Source: Fidelity Digital Assets® Research via Glassnode, 11/14/25.

This anticipated growth assumes a consistent block size, a condition historically absent from Bitcoin blocks, so they represent extremes. A more realistic scenario suggests total blockchain size will grow to just over one terabyte by 2042, reinforcing our view that blockchain growth is unlikely to become a major issue from this change.

This debate has split the community into two: those for the change (Bitcoin Core proponents) and those against (Bitcoin Knots proponents). In reviewing the Core changes, two key questions emerge:

1. Can Bitcoin node runners refuse to relay “spam” transactions?
2. Is arbitrary data something that Bitcoin can sufficiently solve for?

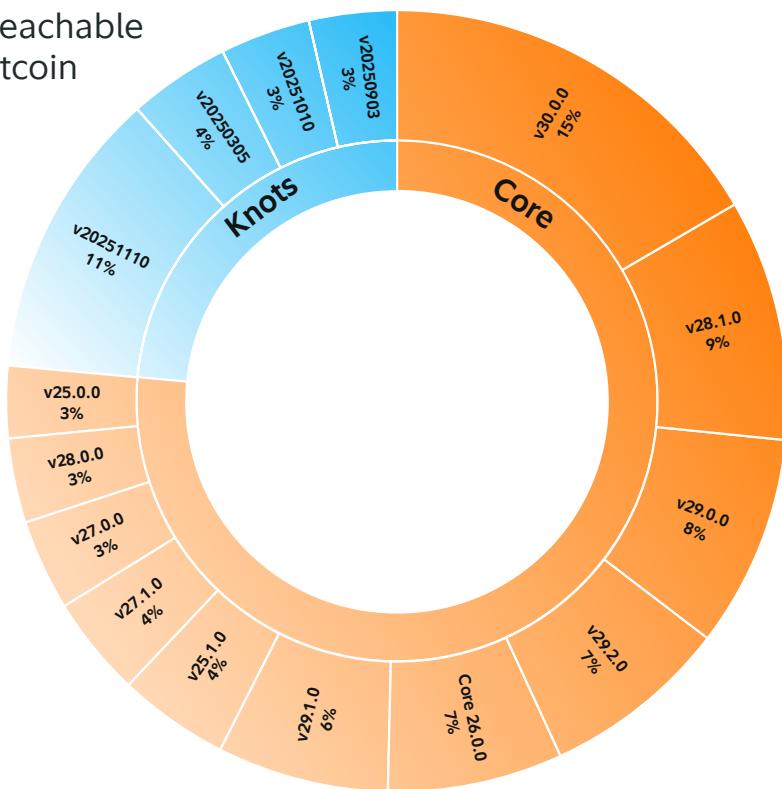
Fidelity Digital Assets Research believes nodes should retain the ability to customize their own policy rules. Therefore, we disagree with the deprecation of the policy variable in future Core versions.

However, we also understand Core’s rationale, which stems from the second question. Simply put, Bitcoin cannot distinguish between “good” and “bad” data, as it only processes 1s and 0s. Attempting to enforce such distinctions would require a centralized system to judge data, undermining Bitcoin’s fundamental ethos.

Bitcoin Core’s change ultimately removed an outdated and ineffective policy rule from the codebase, signaling a shift toward embedding data in a safe, more decentralized manner that does not rely on specific mining pool services. This update aims to preserve Bitcoin’s censorship resistance and acknowledges that Bitcoin will fulfill purposes beyond payments.

Measuring the success of either side of this debate is difficult, but it is worth noting that nodes claiming to run the Bitcoin Knots version quickly rose to the top three node versions.^{24,25} By mid-October 2025, Knots’ share continued to grow even as Bitcoin Core v30 was being released. Interestingly, Bitcoin Core v30 nodes represent over 15% of the network and Knots version 29.2 is a close second at 11% as of December 15, 2025.²⁶

Distribution of Reachable Self-Reported Bitcoin Node Versions



Source: Fidelity Digital Assets® via Bitnodes.io and Coin Dance, accessed 11/18/25. Data consists of top 15 node versions.

The F[r]ee Market

The most misunderstood part of this debate lies in the fee market. Fidelity Digital Assets Research opposes the thesis that increased OP_RETURN size will bloat the chain as well as the premise that “spam” is destroying Bitcoin’s usability.

Considering the on-chain fee data, we must acknowledge that block space demand remained consistently low throughout 2025. Since the inception of Ordinals, Runes, inscriptions, and BRC-20 tokens, all classified as “spam” by the Knots camp, demand for block space has largely come and gone.

For this reason, it appears unlikely that making “spam” easier on Bitcoin would instantly create more given the lack of demand seen today. Even in a scenario where “spam” does drive sustained demand, Bitcoin’s fee market is well-positioned to weather that environment. High fees in 2023 and 2024 did not represent a catastrophic failure of the network then, and they are unlikely to do so in the future. In fact, such dynamics could be considered healthy for Bitcoin’s progression of adoption.

As Saifedean Ammous writes in *The Fiat Standard*: “If Bitcoin dies, it will not have died because of misaligned economic incentives or high transaction fees. It will have died because the demand for it declined.”

Bitcoin’s Governance: Knots vs. Core

The debate between Knots and Core began as a disagreement over policy rules. Knots users fundamentally opposed Bitcoin’s use as a database for non-financial transactions, while Bitcoin Core developers concluded that without a central planner, blocking unwanted transactions was an impossible task.

After the launch of Bitcoin Core v30, the Knots camp escalated their complaint from technical policy to an ethical argument around illegal content. This escalation resulted in a soft fork proposal, which would bring policy rules into consensus. The fork comes with significant ramifications to the Bitcoin network, its users, and their funds. While users may disagree with how others use the blockchain, Fidelity Digital Assets Research believes it is critical that the network remains immutable, decentralized, and censorship resistant.

Without centralized authority, it is inevitable that users will “misuse” a widely distributed tool or protocol. However, Bitcoin’s fee market acts as a deterrent to potential abuse. As demand for block space increases, fees also increase, acting as a filter.

One key takeaway from Bitcoin’s low-fee environment this year is that “spam” transactions are not currently competing with financial transactions for block space. Demand for Ordinals and similar non-financial uses may remain relatively low because immutability for JPEGs and arbitrary data is not a critical user priority.

Therefore, it seems unlikely that demand will grow for these products. Recent blockchain growth and high fees appear to simply be the intended consequences of using the Bitcoin network rather than a direct result of “spam.”

“Prepared, Not Scared”: Staying Ahead of Quantum

Another BIP gaining traction amid advances in quantum computers is “QuBit – Pay to Quantum Resistant Hash” (BIP-360). This proposal introduces significant upgrades to the network to protect users from Shor’s algorithm, which could potentially reverse engineer private keys from exposed public keys. Currently, an estimated 6.6 million bitcoin (\$762 billion) are at risk of a quantum attack because of public key exposure.²⁷

Entering 2025, the Bitcoin community appeared to be preparing for one of several consensus-changing soft forks in development, but the notable surge in quantum-related interest was surprising. As quantum computers improve in efficiency and computational power, forgotten and lost bitcoin held in legacy output types like Pay-To-Public-Key (P2PK) addresses may be targeted.

The exact timeline for this threat remains uncertain. However, it is encouraging to see developers proactively addressing the threat rather than relying on a reactionary approach, as the developers of BIP-360 have coined the motto, “prepared, not scared.”

It is important to note that if quantum computers were capable of exploiting bitcoin wallets in the future, only addresses with exposed public keys would be at risk. Following best security practices and maintaining good address hygiene can help significantly reduce this risk.

In 2026, we anticipate a rise in quantum-focused solutions and custodians aiming to stay ahead of the issue. We also anticipate new layers and tokens that are “quantum-resistant,” along with campaigns promoting products as “quantum-ready.”

Self-custody users should remain vigilant against artificial and malicious “software updates” pushed by bad actors. The coming year is primed for both genuine innovation and opportunistic actors.

Although we do not expect to see full consensus on BIP-360 yet, growing education around the subject will likely drive momentum toward eventual approval.

Institutional Momentum Meets Macro Uncertainty

BY MATT HOGAN

The Bull Case: Liquidity, Stimulus, Adoption, and Valuation Expansion

Although 2025 ended flat, several structural tailwinds suggest digital assets could be poised for a breakout and return to new all-time highs in 2026. Liquidity conditions are shifting meaningfully as quantitative tightening (QT) appears to be ending, and policy signals point toward a gradual loosening cycle, likely accelerating as U.S. Federal Reserve Chair Jerome Powell's tenure concludes.

Fiscal dominance remains a defining theme, with governments increasingly prioritizing growth over austerity. The prevailing approach seemingly relies on growing out of the debt as opposed to cutting spending. This is demonstrated by recent legislation expanding deficits through tax cuts and increased spending under the assumption that economic growth will offset debt.

The U.S. national debt alone has surpassed a staggering \$38 trillion, a figure unlikely to be repaid in full as the growing debt-to-GDP ratio will only compound the challenge. Furthermore, interest payments on this debt—currently just under \$1 trillion annually—have become the third-largest budget item for the U.S. government.²⁸

With nominal GDP near \$30.5 trillion, the U.S. debt-to-GDP ratio sits roughly at 125%, up from 91% in 2010 and just 56% in 2000.²⁹ If history rhymes, this mounting debt burden will likely be addressed in the short term through easier monetary policy, creating favorable liquidity conditions in the year ahead.

One of the most significant potential liquidity unlocks lies in the \$7.5 trillion currently held in U.S. money market funds.³⁰ These assets have benefited from elevated short-term yields during the tightening cycle, but as interest rates normalize, the opportunity cost of remaining in cash will rise. A rotation out of money markets into risk assets, particularly those offering asymmetric upside like digital assets, could act as a powerful accelerator for capital inflows.

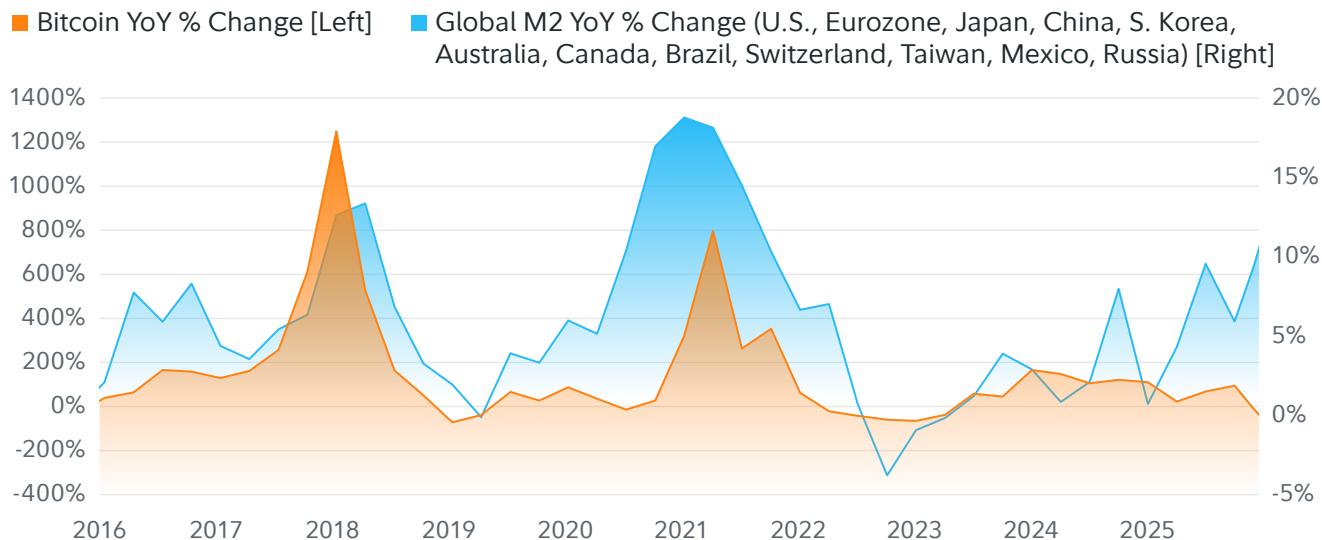
If even a small fraction of this capital reallocates, it could create an environment that would materially strengthen the case for new highs. With the added possibility of renewed stimulus checks reaching individual accounts, the market may have a compelling setup for increased risk-on sentiment, even amidst new all-time highs in the S&P as well as gold in late 2025.

Recent increases in global liquidity indicate that major central banks are making more money available to their economies. This is typically achieved by lowering interest rates or purchasing government bonds and other securities to expand the money supply. Fidelity Digital Assets' research has shown a tight correlation between bitcoin and liquidity conditions, or more specifically in this case, the M2 money supply.

When M2 expands, it typically reflects central bank or government policies that inject liquidity into the system through lower rates, quantitative easing, fiscal spending, or increased lending. Scarce assets such as bitcoin often benefit from this increase in liquidity, acting as a "liquidity sponge."

When comparing bitcoin's price to the M2 growth rates of global economies, there is a clear correlation that bitcoin tends to rise with the growth of the M2 supply. Historically, bitcoin bull markets have aligned with periods of increased global liquidity. As a new monetary easing cycle has begun globally and with the Fed's QT program ending, it is likely that we will see this growth rate continue to the upside throughout 2026, a positive catalyst for bitcoin's price.

Global M2 and Bitcoin YoY Change



Source: Fidelity Digital Assets® Research via Bloomberg, 12/15/25.

Additionally, institutional adoption continues to deepen as institutions demonstrated an appetite for exposure to both bitcoin and ether in 2025. This highlights institutional investors' shifting view of digital assets as mere speculative positions. Instead, they are becoming core components of asset allocation strategies. Spot ETP flows remained robust, with spot bitcoin ETPs collectively holding over \$123 billion in AUM (as of November 18, 2025) after beginning the year just under \$107 billion.³¹

Valuation models, from the Puell Multiple to MVRV, indicate that current prices remain below historical top ranges, particularly when accounting for healthy network activity and liquidity inflows. If liquidity truly floods back into capital markets, and more specifically risk assets, digital assets could lead the charge toward new highs.

These dynamics, combined with strong on-chain fundamentals such as rising active addresses, growing stablecoin velocity, and robust developer activity create a compelling backdrop for valuation expansion in 2026.

The Bear Case: Sticky Inflation, Stress Selling, Strength of Dollar, and Shakeouts

Despite these bullish signals, macro headwinds remain formidable. Inflation remains sticky despite showing signs of moderating, and policy—while gradually becoming less restrictive—is far from accommodative. Dollar strength persists even with growing conviction in the so-called "debasement" trade, creating a drag on global liquidity and risk appetite.

Continued geopolitical tensions, the 2025 U.S. government shutdown, and regional conflicts injected uncertainty into markets, while stagflation risks loom as growth slows without a commensurate decline in prices. The long-anticipated recession remains elusive, but its shadow continues to weigh on sentiment, particularly as the fiscal space narrows and debt sustainability concerns rise.

If the market were to experience significant stress or face a broader sell-off in 2026, it is possible that bitcoin would sell-off the hardest, in part due to its incredibly liquid nature and riskier investment profile. **This possibility may remain especially pervasive after the significant rise in valuations of technology and AI companies throughout 2025.**

If these companies begin to sell-off, bitcoin is likely to depreciate alongside them as it has historically been closely correlated to more volatile tech stocks from a short-term price action standpoint relative to other assets. **If the market moves in a general risk-off direction, and especially so if it begins to show increasing signs of stress, bitcoin will most likely not be immune as all correlations tend to converge in a time of crisis.**

The near-term outlook for digital assets remains uncertain. Perhaps holders have been taking profits and rotating capital elsewhere, with the absence of fresh inflows limiting upside momentum. However, it is worth noting that a large driver of bitcoin's Q4 2025 correction was profit-taking from the long-term holder cohort of investors, potentially signaling seller exhaustion and cost basis resetting at new support levels near \$85,000.

The October 10, 2025 shakeout remains a psychological and structural overhang. The event triggered forced liquidations and margin calls across derivatives markets, leading to a wave of deleveraging that has left behind residual unease. This lingering fragility has kept risk appetite subdued, with market participants reluctant to re-leverage aggressively. While this has put short-term downward pressure on digital asset prices, this leverage washout and resetting may become a positive in 2026.

This liquidation event erased far more value than the FTX collapse, yet it could underscore bitcoin's resiliency and maturity. Despite the flash crash, bitcoin stabilized at a local bottom near \$80,000, reflecting higher lows during periods of market stress. The depth and liquidity of the bitcoin market has grown substantially in a short time, enabling it to absorb shocks.

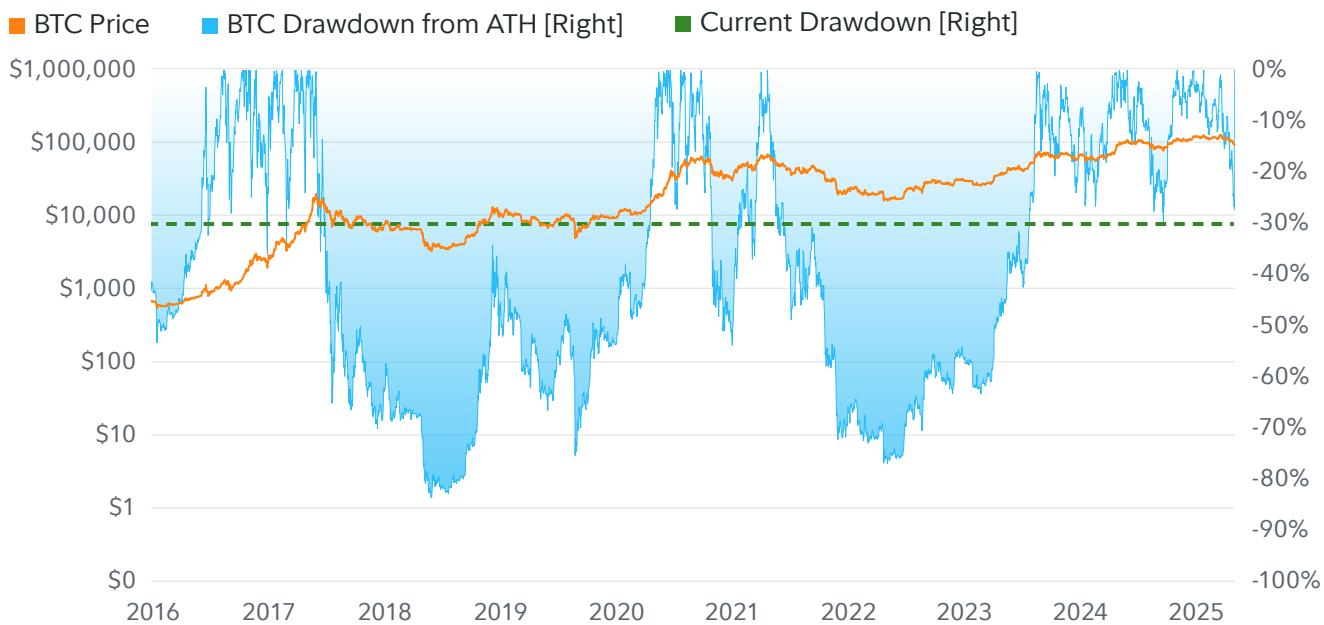
Although we highlighted the potential for looser monetary policy and potential liquidity unlocks in the previous section, these outcomes largely depend on decisions made based on market data. Monetary policy may be gradually loosening, but it may not be moving fast enough. Although rates are coming down, they are still quite restrictive and may remain so, especially if economic data is delayed.

It seems unlikely the Fed can achieve its 2% inflation target without causing stress in the labor market. If it remains committed to this mandate, the result could be a prolonged period of restrictive policy and potential market corrections. Should that scenario unfold, we may see this weakness reflected in lower digital asset prices.

Finally, geopolitical tensions and stagflation risks remain unresolved, while the dollar's strength continues to pressure global liquidity. In this environment, even strong on-chain fundamentals may not be enough to offset macro headwinds. The path to new all-time highs is therefore not only uncertain but likely to be non-linear and fragile, requiring a decisive shift in both policy and sentiment before a sustainable breakout can occur.

Although bitcoin is down over 30% from its all-time high, this drawdown has been much more shallow than previous corrections, which have been as deep as 80% or more. Further, bitcoin's price seems to be holding strong near the \$85,000 level, signaling higher lows with each subsequent drawdown from new all-time highs.

Bitcoin Price and Drawdown From High



Source: Fidelity Digital Assets® Research via Glassnode, 12/15/25.

Stagflation Didn't Materialize... Just Don't Tell Gold! BY CHRIS KUIPER, CFA

In the 2025 Look Ahead, we questioned why nobody seemed to be discussing stagflation. Although it was not a prediction, it appeared odd that investors did not seem to at least consider it as a potential scenario, even at a low probability.

Fortunately, the market did not get the economic contraction nor the high inflation of a stagflation scenario in 2025, although inflation remains stubbornly closer to 3% than the Fed's 2% target. However, one would not know it looking at the record-breaking run for gold.

Gold returned 65% in 2025, one of the highest annual gains since the stagflation period of the 1970s and 1980s. In fact, 2025's return ranks as the fourth highest annual return for gold since going off the gold standard as seen in the table, "Historical Gold Performance: Ten Best Years." However, unlike that period, today's rally appears to be driven more by geopolitical and financial risks than purely an inflation hedge. That said, gold has historically moved in waves, carried by the momentum of these large tectonic shifts.

Another strong year for gold would not be surprising. World central banks have been aggressively buying gold while reducing holdings of U.S. Treasuries. Continued geopolitical risks, de-dollarization, and dollar

weakness further support this. Collectively, these factors reflect a broader shift away from the dollar-based system and toward adding exposure to an asset "outside" of the traditional system.

Historical Gold Performance: Ten Best Years

Year	Year's Performance	Following Year's Performance
1979	127%	15%
1974	72%	-24%
1973	67%	72%
2025	65%	?
1972	47%	67%
1978	37%	127%
2007	31%	6%
2010	30%	10%
2024	27%	58%
2020	25%	-4%
Average		36%

But what could this mean for bitcoin? We continue to view gold and bitcoin as having many similar characteristics when it comes to a monetary good—a commodity with no central issuer, no cash flows, and whose primary purpose is to serve as a store of value. Most importantly, both can be a geopolitically neutral good or commodity that is recognized worldwide.

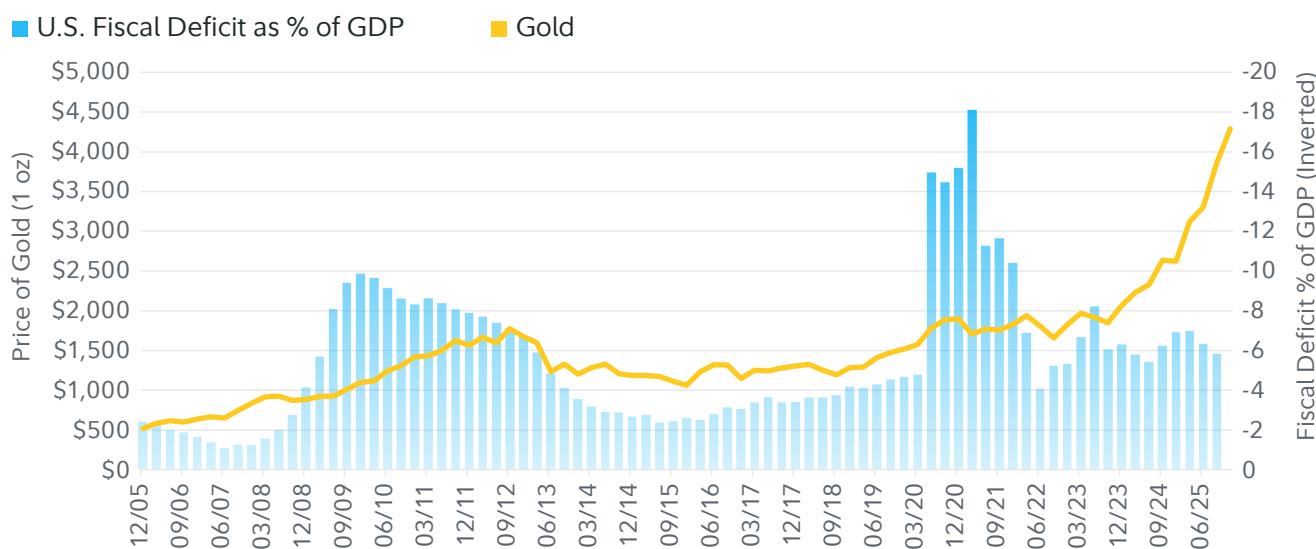
Gold's advantage over bitcoin (and one of the reasons it rallied in 2025) is it is widely recognized by institutions, central banks, and governments around the world. It also is supported by thousands of years of history and has a well-worn infrastructure for institutions to easily purchase it with a deep and large market.

That said, we believe more institutions will begin to see some of the advantages of bitcoin over gold and may start to allocate. The very first central bank recently purchased bitcoin, a possibility we discussed as early as our [2023 Look Ahead](#).³² Although this was in a "test account" with a small amount of money, the fact that it was done demonstrates the evaluation process is proceeding. In our opinion, it also makes it far more likely for others to follow.

We believe both bitcoin and gold will likely benefit given the current macro environment of high and persistent fiscal deficits, along with trade wars and geopolitical events, making the holding of a geopolitically neutral money or asset "outside of the system" more attractive.

Source: Fidelity Digital Assets® Research Calculations, data via Bloomberg, 12/15/25.

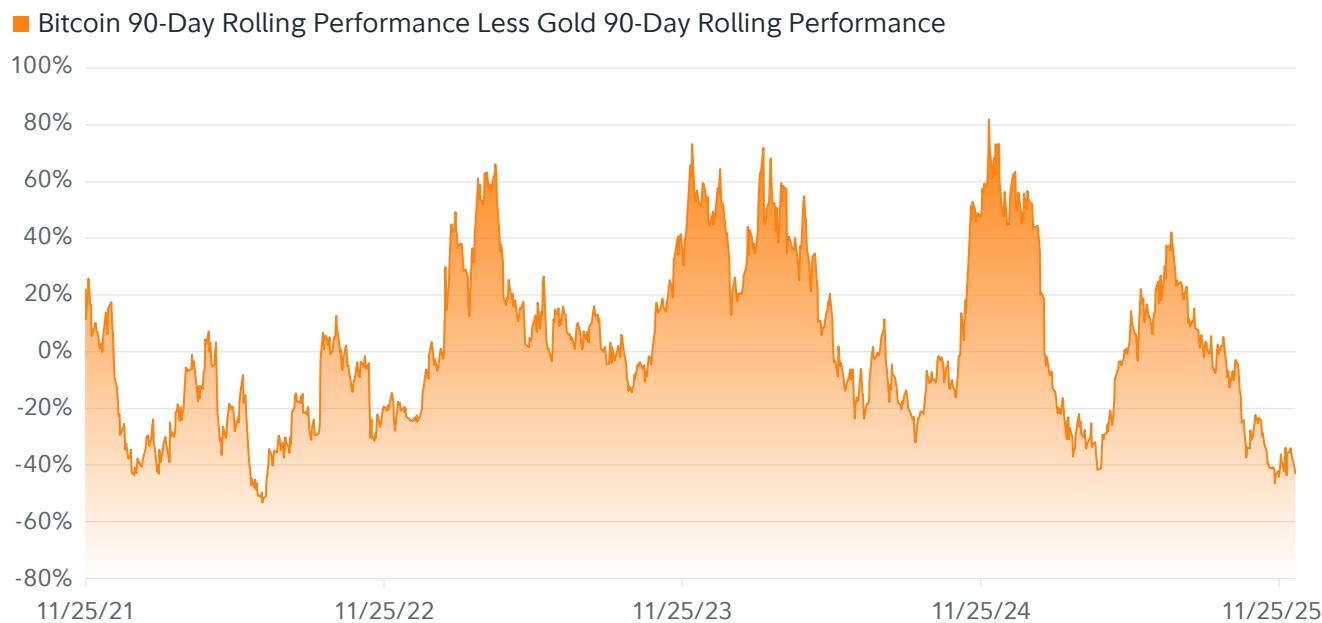
U.S. Fiscal Deficits and Price of Gold



Source: Fidelity Digital Assets® Research Calculations, data via Bloomberg, 12/15/25.

Although gold and bitcoin occasionally move in tandem, their long-term correlation is only mildly positive, which we somewhat counterintuitively find attractive. This suggests bitcoin can potentially enhance a portfolio's risk-adjusted returns without adding a "levered gold" asset. Historically, gold and bitcoin have taken turns outperforming. With gold shining in 2025, it would not be surprising if bitcoin takes the lead next.

Bitcoin Versus Gold 90-Day Over/Under Performance



Source: Fidelity Digital Assets® Research calculations, data via Bloomberg, 12/15/25.

Conclusion: The Shipping Container Moment Has Arrived

Much like the shipping container faced resistance from almost every angle, the digital assets industry continues to endure challenges from both within itself and externally. However, each hurdle overcome ultimately leaves the industry stronger and more resilient.

Fidelity Digital Assets Research believes that in a relatively short period of time, these assets, tools, and technologies will permeate nearly every corner of the financial industry and beyond, reshaping them in ways that were not even anticipated, just as the humble shipping container revolutionized global trade.

Interested in discussing these developments with our team?

[Get in Touch](#)

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01. <https://fortune.com/crypto/2025/10/29/mastercard-zerohash-acquisition-bvnk-stablecoins-coinbase/>
02. <https://news.bgov.com/bloomberg-government-news/texas-gov-abbott-signs-bill-to-create-state-bitcoin-reserve>
03. [STRENGTHENING AMERICAN LEADERSHIP IN DIGITAL FINANCIAL TECHNOLOGY](#)
04. <https://rodneywhitecenter.wharton.upenn.edu/wp-content/uploads/2014/04/9920.pdf>
05. [Celebrating 50 years of Market Innovation](#)
06. [OCC - Historical Volume Statistics](#), accessed December 12, 2025.
07. [Options Activity Review and Preview | Cboe](#)
08. [Glassnode Studio - On-Chain Market Intelligence](#), accessed December 12, 2025.
09. [Glassnode Studio - On-Chain Market Intelligence](#), accessed November 22, 2025.
10. [Glassnode Studio - On-Chain Market Intelligence](#), accessed December 12, 2025.
11. [Gold Futures Volume & Open Interest - CME Group](#), accessed November 28, 2025.
12. [Glassnode Studio - On-Chain Market Intelligence](#)
13. [Glassnode Studio - On-Chain Market Intelligence](#)
14. Bloomberg L.P.
15. Bloomberg L.P.
16. <https://sosovalue.com/assets/etf/us-btc-spot-options>
17. [Cantor's Bitcoin Financing Business Fully Operational; Executes Initial Trades Throughout May - Cantor | Cantor](#)
18. [JPMorgan \(JPM\) Plans to Offer Clients Financing Against Crypto ETFs - Bloomberg](#)
19. Blockworks Analytics, accessed December 15, 2025
20. <https://blog.uniswap.org/unification>
21. <https://governance.aave.com/t/arfc-aave-buybacks-program-an-update/23290>
22. <https://finance.yahoo.com/news/cipher-mining-announces-5-5bn-124821991.html>
23. <https://cryptoslate.com/bitcoin-miner-to-ai-landlord-microsoft-signs-9-7b-deal-with-btc-miner-iren/>
24. <https://bitcoin.clarkmoody.com/dashboard/>
25. <https://coin.dance/nodes/all>
26. Fidelity Digital Assets via Clark Moody Bitcoin Dashboard, 11/19/25.
27. <https://www.projecteleven.com/bitcoin-risq-list>
28. <https://fiscaldata.treasury.gov/americas-finance-guide/national-debt/>
29. <https://fred.stlouisfed.org/series/GDP>
30. <https://fred.stlouisfed.org/series/MMMFAQ027S>
31. https://charts.checkonchain.com/btconchain/etfs/etf_balance_1/etf_balance_1_light.html
32. <https://www.cnb.cz/en/cnb-news/press-releases/The-CNB-creates-a-test-portfolio-of-digital-assets/>