

# BITCOIN ADOPTION, VOLATILITY, AND MARKET CAP

Exploring the impact of the Strategic Bitcoin Reserve  
on the broader bitcoin ecosystem.

## About

As part of Gemini's mission to offer trusted information for institutional investors, we collaborated with Glassnode, a leading analytics firm, for a comprehensive report on institutional crypto market shifts and the potential impact of the Strategic Bitcoin Reserve.

### GEMINI

Gemini is a global crypto platform founded by Cameron and Tyler Winklevoss in 2014. Gemini offers a wide range of crypto products and services for individuals and institutions in over 70 countries. Gemini's simple, reliable, and secure products are built to unlock the next era of financial, creative, and personal freedom.

Gemini Institutional is a compliant, regulated and secure platform serving businesses, professional traders, institutional investors, private wealth, fintechs and banks.

### glassnode

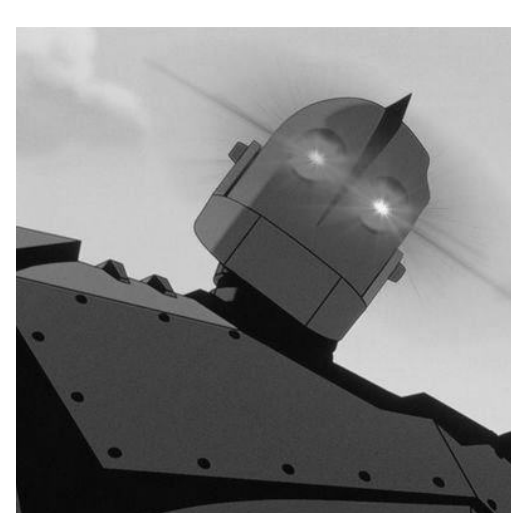
Glassnode is the leading market intelligence provider in the digital asset space, primarily focused on institutions. Glassnode's platform delivers unparalleled on-chain analytics and deep insights into Bitcoin, Ethereum, and selected major digital assets.

Founded in 2017, Glassnode equips institutional investors, hedge funds, banks, and asset managers with near real-time, data-driven intelligence, enabling informed decision-making in a highly dynamic trading environment.

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# KEY FINDINGS

In March 2025, the U.S. established a Strategic Bitcoin Reserve (SBR), formally recognizing bitcoin as a sovereign-grade asset. The SBR's launch, alongside the rise of regulated offchain platforms, signals bitcoin's transition into a macro-financial instrument. These developments are anchoring supply, reducing volatility, and strengthening institutional confidence—ushering in a new phase of strategic adoption.

- **Over 30% of bitcoin is held by centralized entities**, with a small group of early adopters controlling a disproportionate share across most categories.
- **Sovereign treasuries play an outsized role**, whether through dormant holdings (e.g., the U.S., China) or active DCA strategies (e.g., El Salvador, Bhutan), with growing impact on market psychology and stability.
- **Offchain venues dominate volume**, with centralized exchanges, ETFs, and derivatives platforms facilitating the majority of trading—driving a new era of institutional market structure.
- **Volatility has declined across timeframes**, with recent cycles defined by more consistent, sustained rallies that appeal to long-term investors.
- **Each \$1 of capital deployed into bitcoin can increase the total bitcoin market cap by up to \$25 in the short term**, and ~\$1.70 over a full cycle—highlighting the reflexive power of institutional inflows.



## Growing Adoption



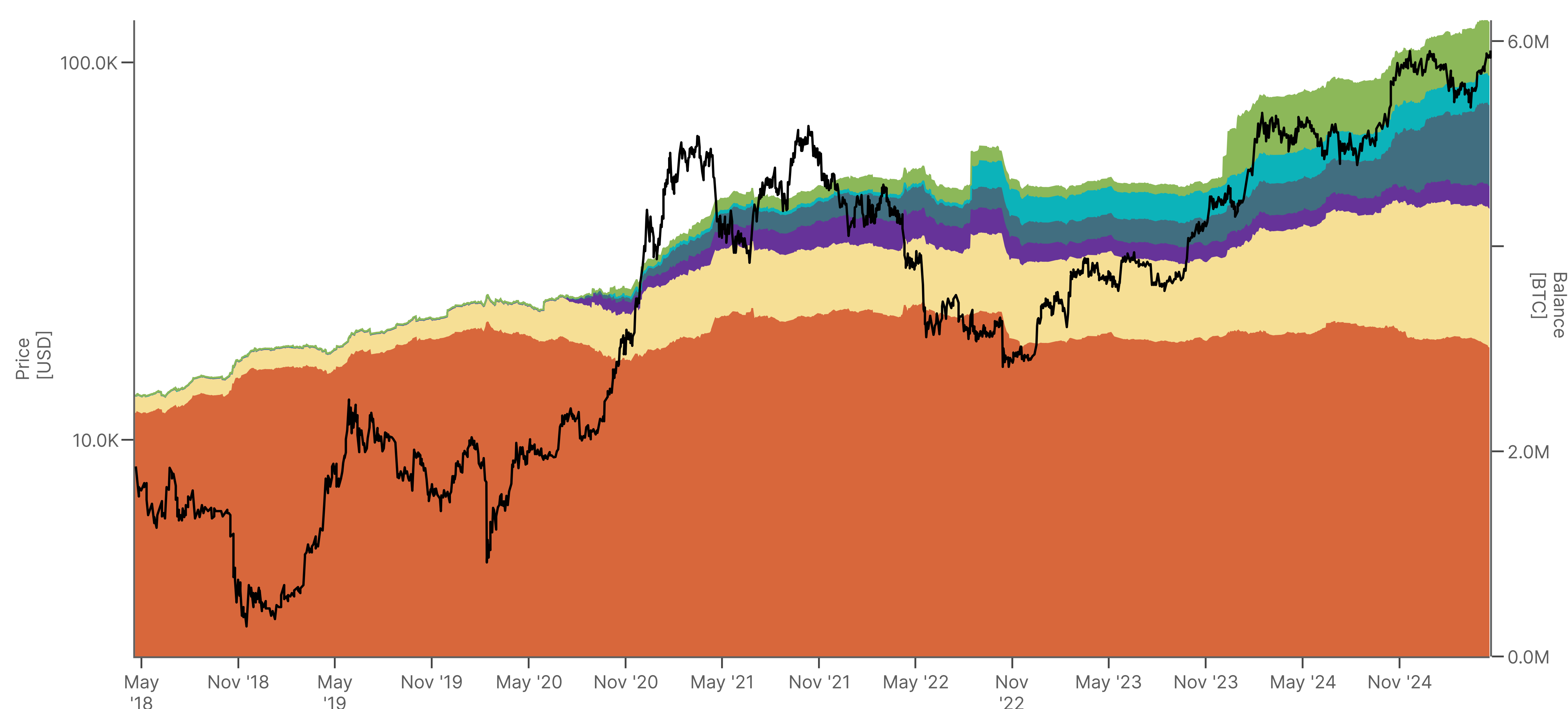
**Over 30% of bitcoin's circulating supply is now held by just 216 centralized entities, reflecting both expanding institutional adoption and deepening custodial centralization.**

Since early 2015, centralized exchanges have emerged as the dominant custodians of bitcoin, initially holding just under 600K BTC on behalf of their users. Today, the total bitcoin held across major institutional and custodial entities has surged to **6,145,207 BTC**, representing an **increase of 924%** in supply held by centralized entities over the past decade.

During the same period, the spot price of bitcoin has climbed from under **\$1,000 to over \$100,000**, reinforcing the thesis that institutions increasingly view bitcoin as a strategic asset. This report analyzes **216 entities** spanning six key categories—exchanges, ETFs/funds, public and private companies, DeFi contracts, and governments. While not exhaustive, this dataset captures the most influential players that now collectively hold **nearly one-third of all circulating bitcoin**.

### Treasury Holdings by Entity Type [BTC]

Government Private Companies Public Companies DeFi/Smart Contract ETF/Funds Exchange Bitcoin Price (USD)





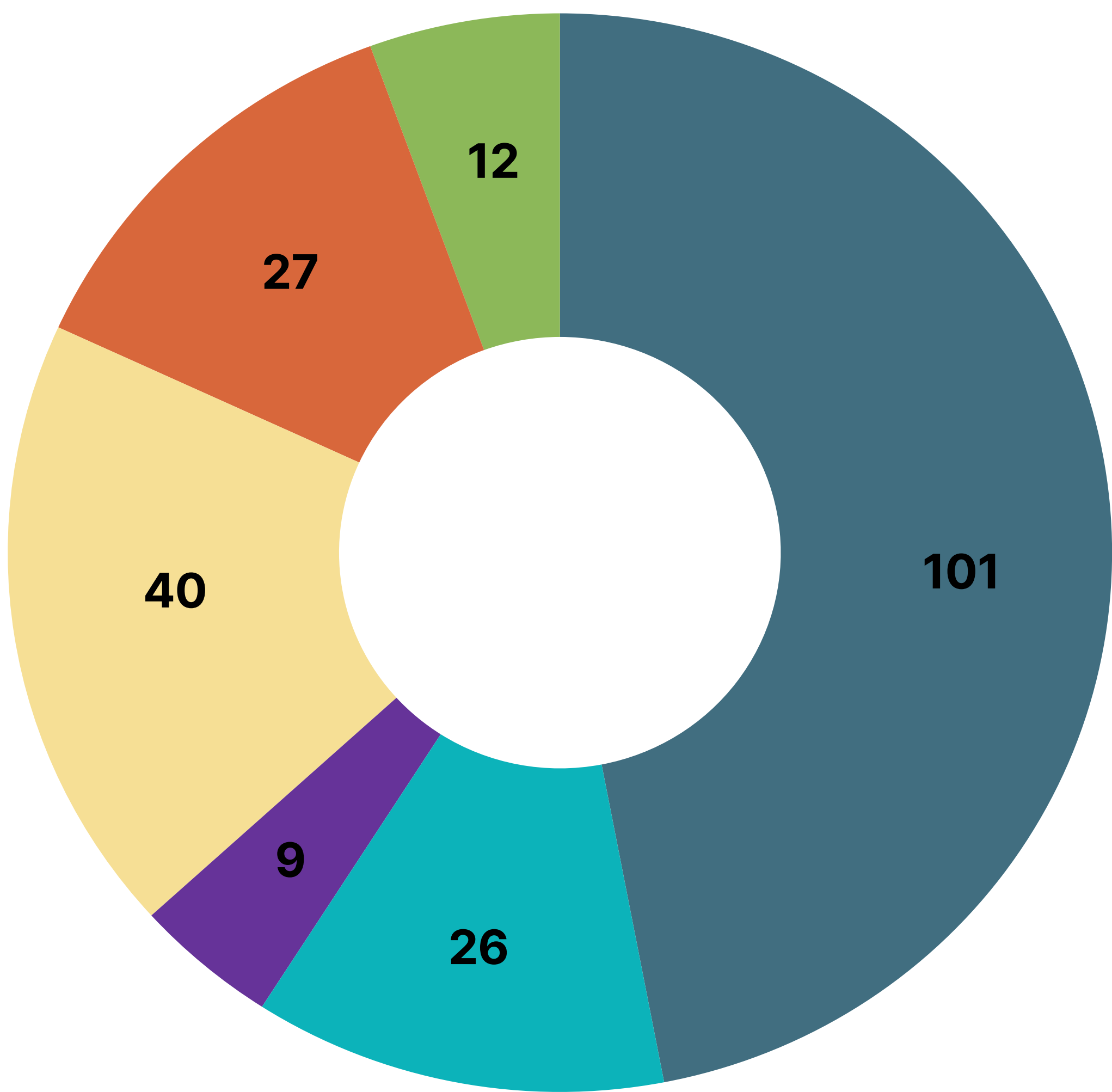
# Growing Adoption continued

Among the 216 entities spanning six categories, exchanges hold the greatest amount of bitcoin, while public companies are the most numerous. These categories are:

- Exchanges
- ETFs/Funds
- Public companies
- Private companies
- DeFi contracts
- Governments

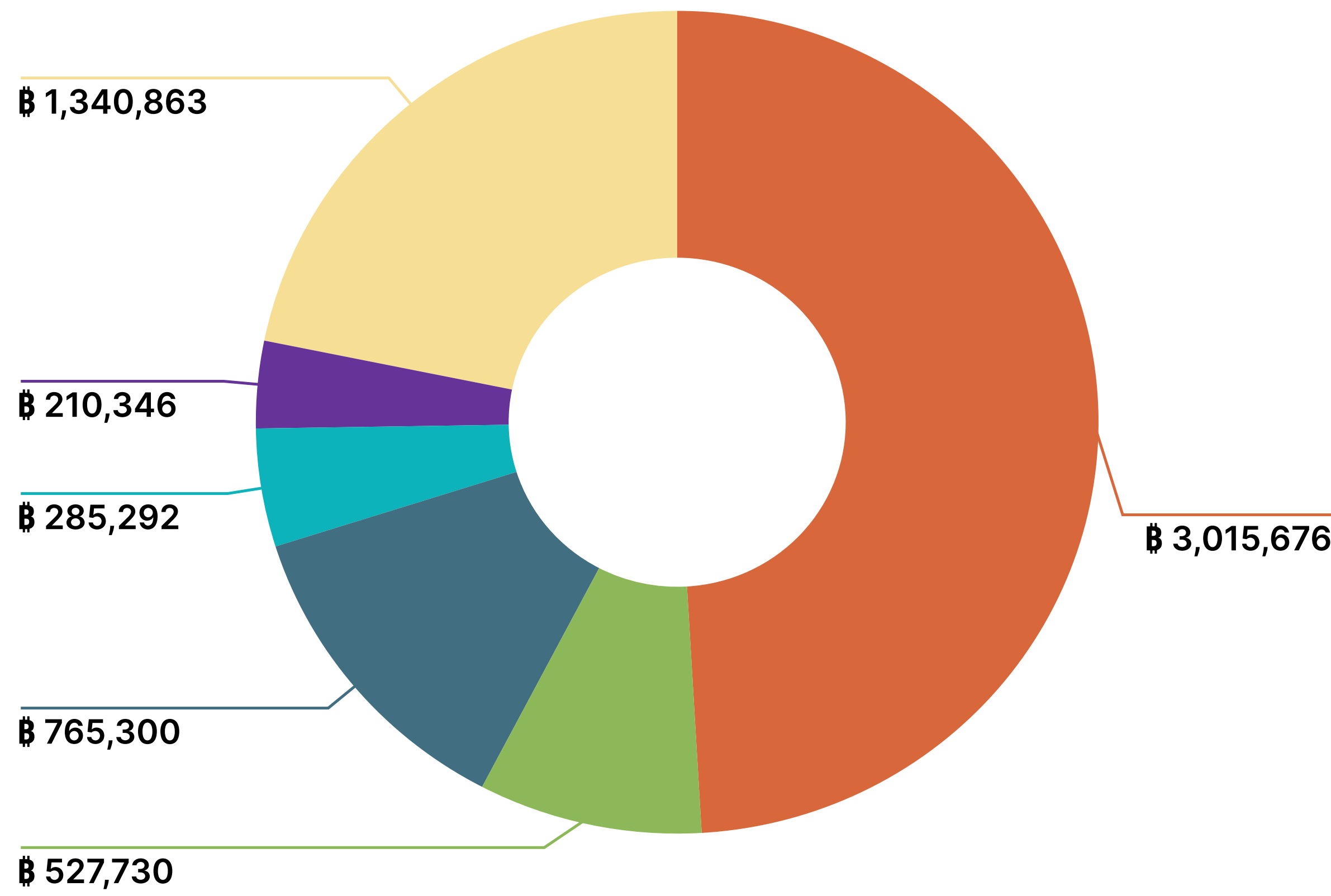
Entity Count

Public Companies Private Companies DeFi/Smart Contract  
ETF/Funds Exchange Government



Entity Size

Public Companies Private Companies DeFi/Smart Contract  
ETF/Funds Exchange Government



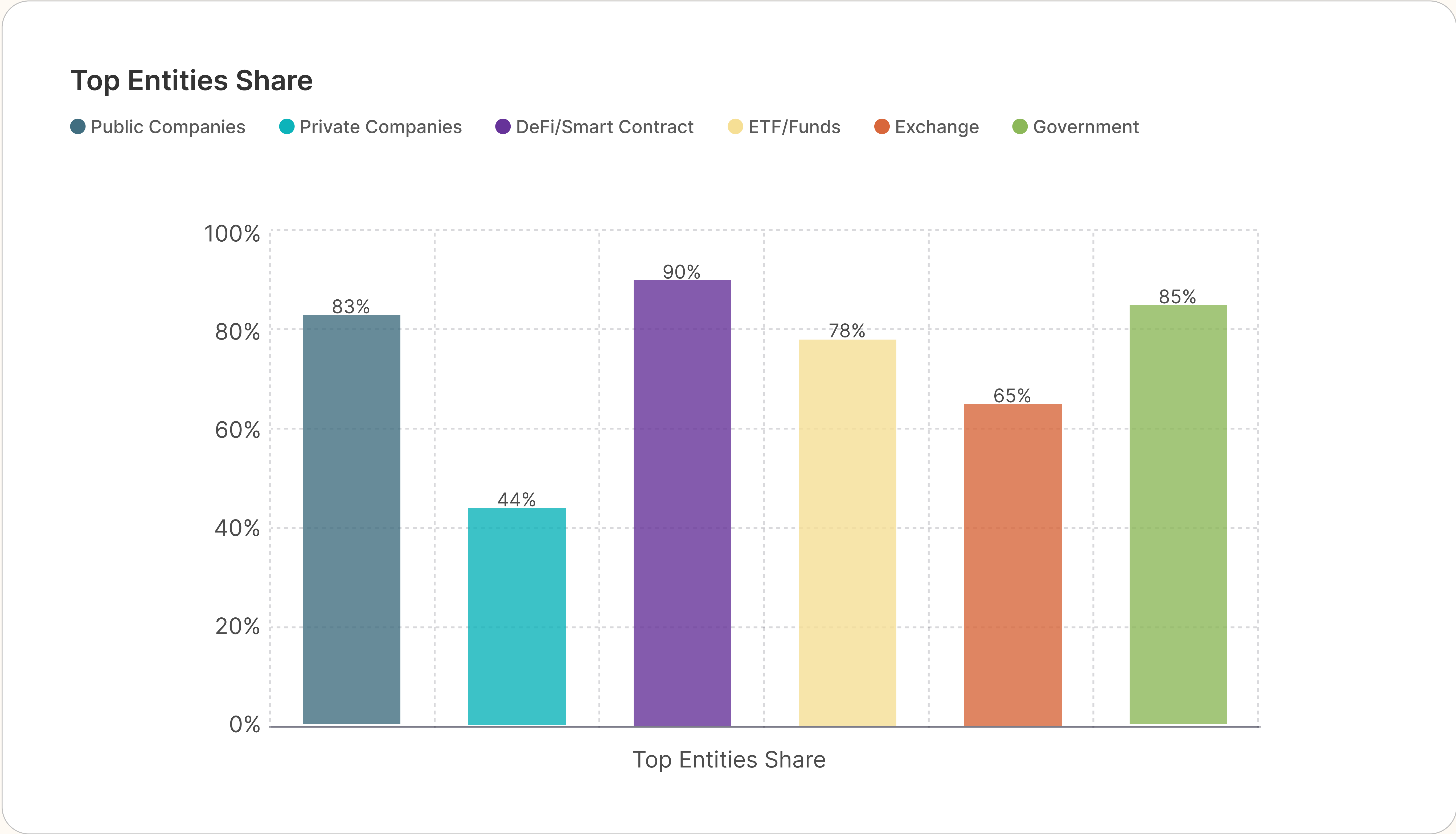


# Pioneers at the Helm

💡 **Three entities dominate bitcoin adoption across nearly all respective categories, signaling that early adopters continue to shape institutional market structure.**

Across nearly all institutional categories—excluding private companies—the top three entities control between 65% to 90% of total holdings, underscoring the dominance of early adopters in the Bitcoin treasury space. This pattern is particularly stark in the DeFi, public company, and ETF/fund categories, where pioneers have shaped the early trajectory of adoption.

In contrast, private company holdings appear more distributed, reflecting a broader base of engagement. While this dominance is expected to decline as markets mature, these centralized leaders have played a crucial role in channeling capital into bitcoin holdings and legitimizing it as a global macro asset class.



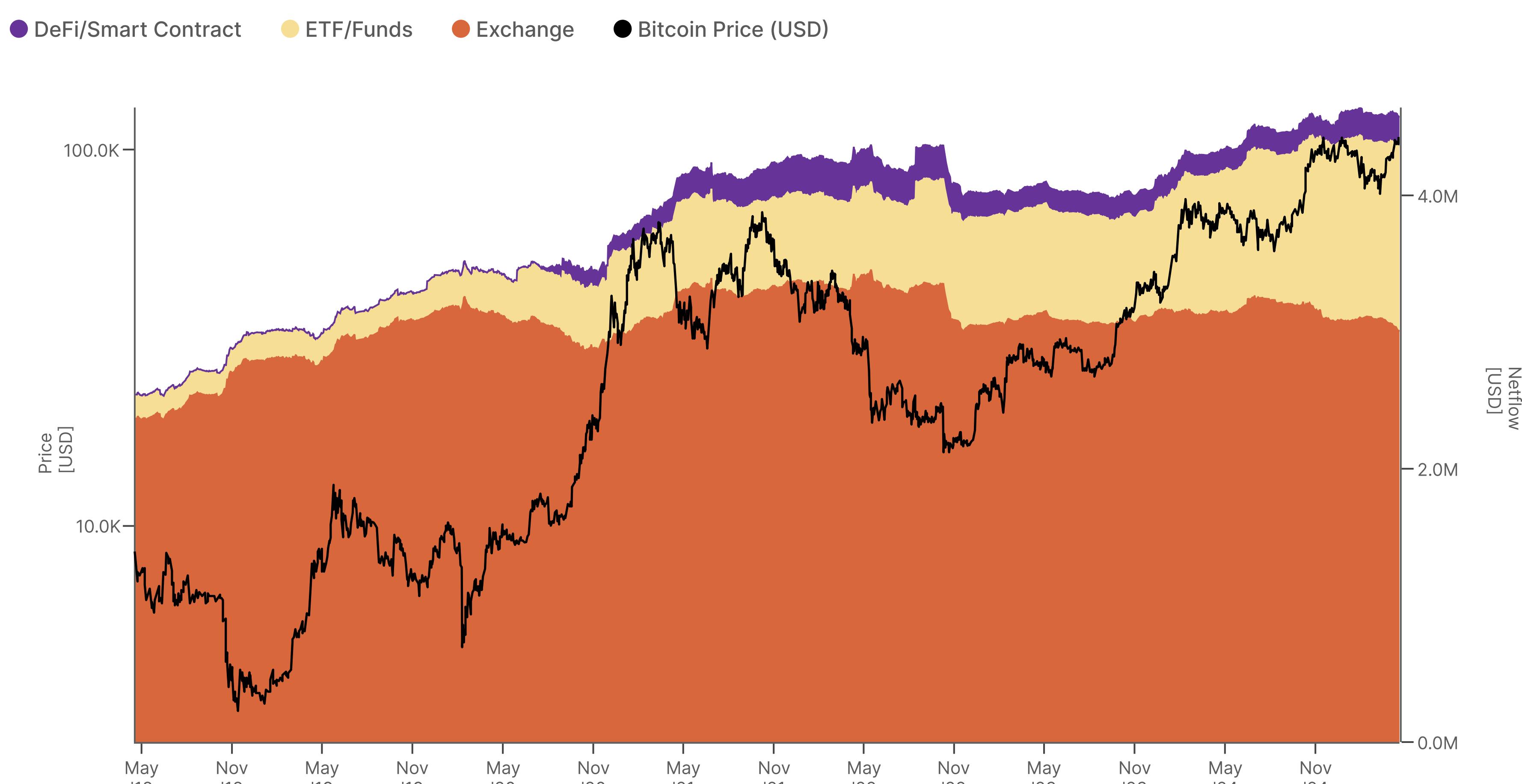


## Spot Custodians: Stable Supply, Growing Impact



**Despite a steady aggregate balance, the spot trading sector exerts growing influence on price, driven by investor flows and the rising dominance of ETFs.**

Treasury Holdings by Entity Type [BTC]

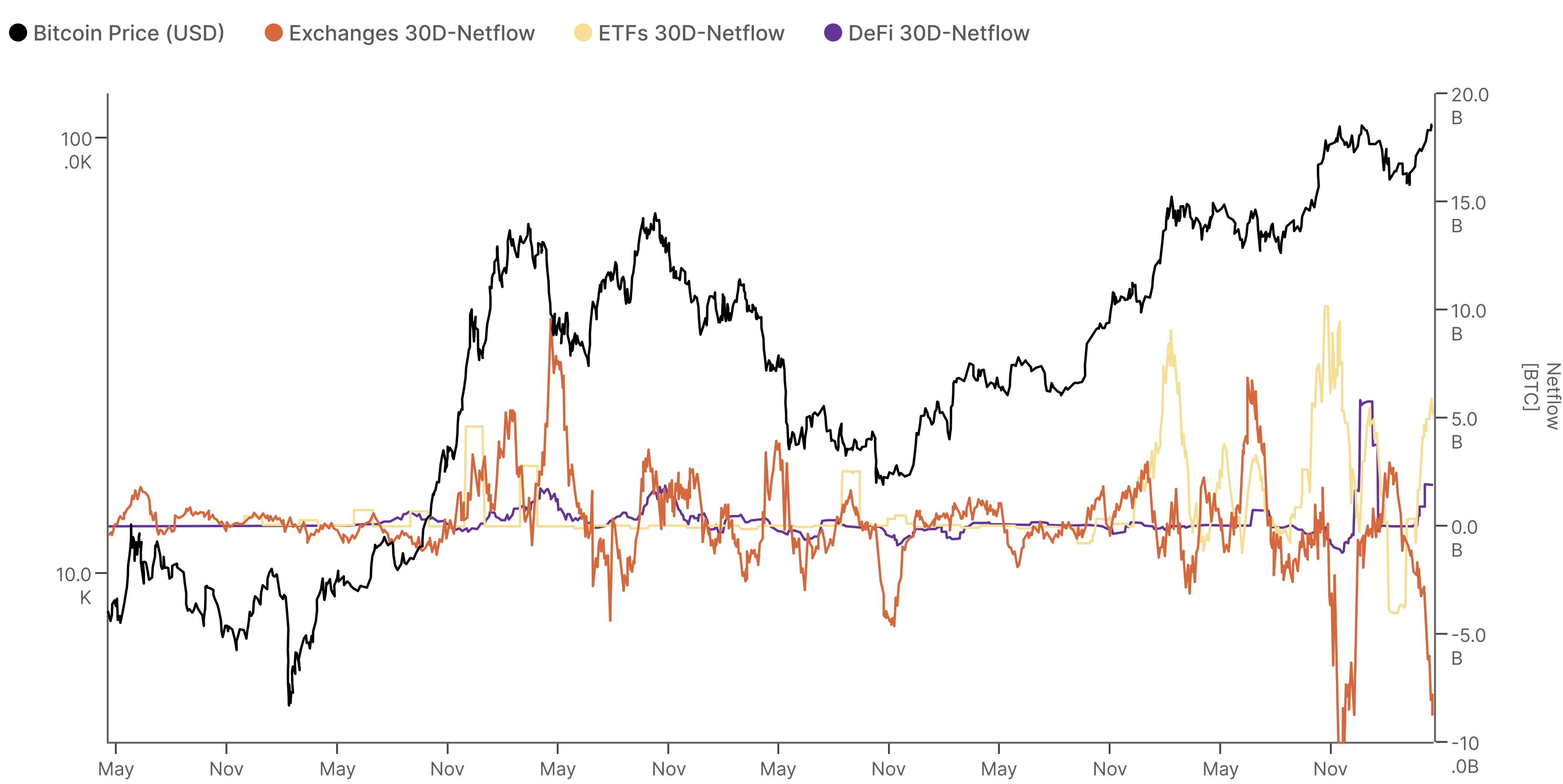


Centralized exchanges, ETFs/Funds, and to a lesser extent, DeFi protocols, serve as custodians for bitcoin held on behalf of clients seeking spot market exposure. While centralized exchange balances have declined over the past two years, this has often been misinterpreted as a looming supply shock.

In reality, most of this bitcoin has migrated to ETFs and funds, particularly U.S. spot ETFs. The total bitcoin held by this spot trading sector has remained relatively stable, ranging between 3.9M–4.2M BTC since June 2021. This stable range suggests that the drop in exchange balances does not imply shrinking supply, but rather a structural reshuffling of custody.

Although the growing ETF share reflects increased TradFi adoption, the aggregate liquidity available to spot buyers remains largely unchanged.

Treasury 30D-Netflow by Entity Type [USD]



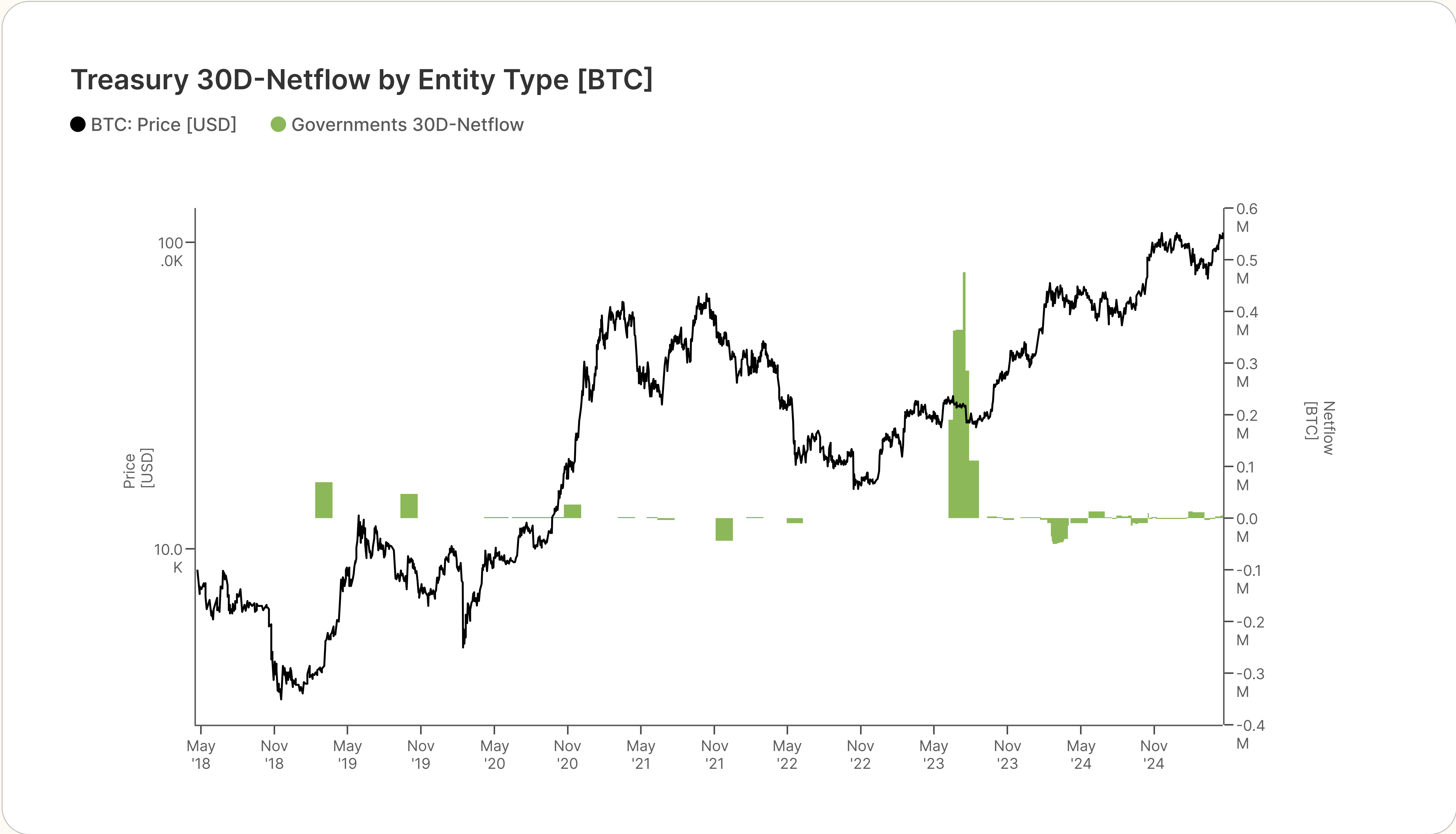
These custodians are highly responsive to market volatility. Net monthly flows can massively swing between  $\pm \$10B$ , underscoring their growing influence on price action despite relatively stable aggregate holdings.



# Sovereign Treasuries

 Sovereign treasuries influence markets through passive holdings, legal seizures, and strategic policy signals.

Unlike active market participants, sovereign treasuries rarely rebalance. Their wallets show infrequent movement and little correlation with bitcoin’s price cycles, yet they hold enough to impact markets when coins are moved or sold.





## Sovereign Treasuries continued

This pattern is particularly evident in Government Treasuries of the U.S., China, Germany and the United Kingdom, where most coins are acquired through legal enforcement actions rather than market participation.

The U.S. holds over ~200k BTC, making it one of the largest sovereign holders. Key seizures include:

- 69,369 BTC from the Silk Road case, seized in November 2020
- 94,643 BTC from the Bitfinex hack, seized in February 2022

After a relatively modest decline in U.S. government-held bitcoin, a significant portion of the remaining balance was designated as the foundation of the Strategic Bitcoin Reserve (SBR) through an executive order issued by President Trump on March 6, 2025.

The United Kingdom has also accumulated bitcoin through its National Crime Agency, targeting cybercrime and illicit activity.

After banning crypto trading and mining, China confiscated over 194,000 BTC in November 2020 from the PlusToken Ponzi scheme — one of the largest law enforcement crypto crackdowns in history.

Germany had actively seized coins in recent years through state-led investigations but officially liquidated all Bitcoin holdings by April 29, 2025.

These holdings represent a structurally distinct class—dormant, but capable of moving markets when activated.

### US, UK & Germany Government Balance

● BTC: UK Government Balance [BTC] ● BTC: US Government Balance [BTC] ● BTC: Price [USD] ● BTC: German Government Balance [BTC]



## Sovereign Treasuries continued

In contrast, **El Salvador** and **Bhutan** accumulate bitcoin via intentional, ongoing purchases—often through dollar-cost averaging. While smaller in size, these strategic allocations signal long-term commitment and reinforce investor confidence. Their actions provide legitimacy to bitcoin as a sovereign-grade asset, encouraging broader institutional participation and market stability.

El Salvador & Bhutan Government Balance

● BTC: El Salvador Government Balance [BTC] ● BTC: Bhutan Government Balance [BTC] ● BTC: Price [USD]



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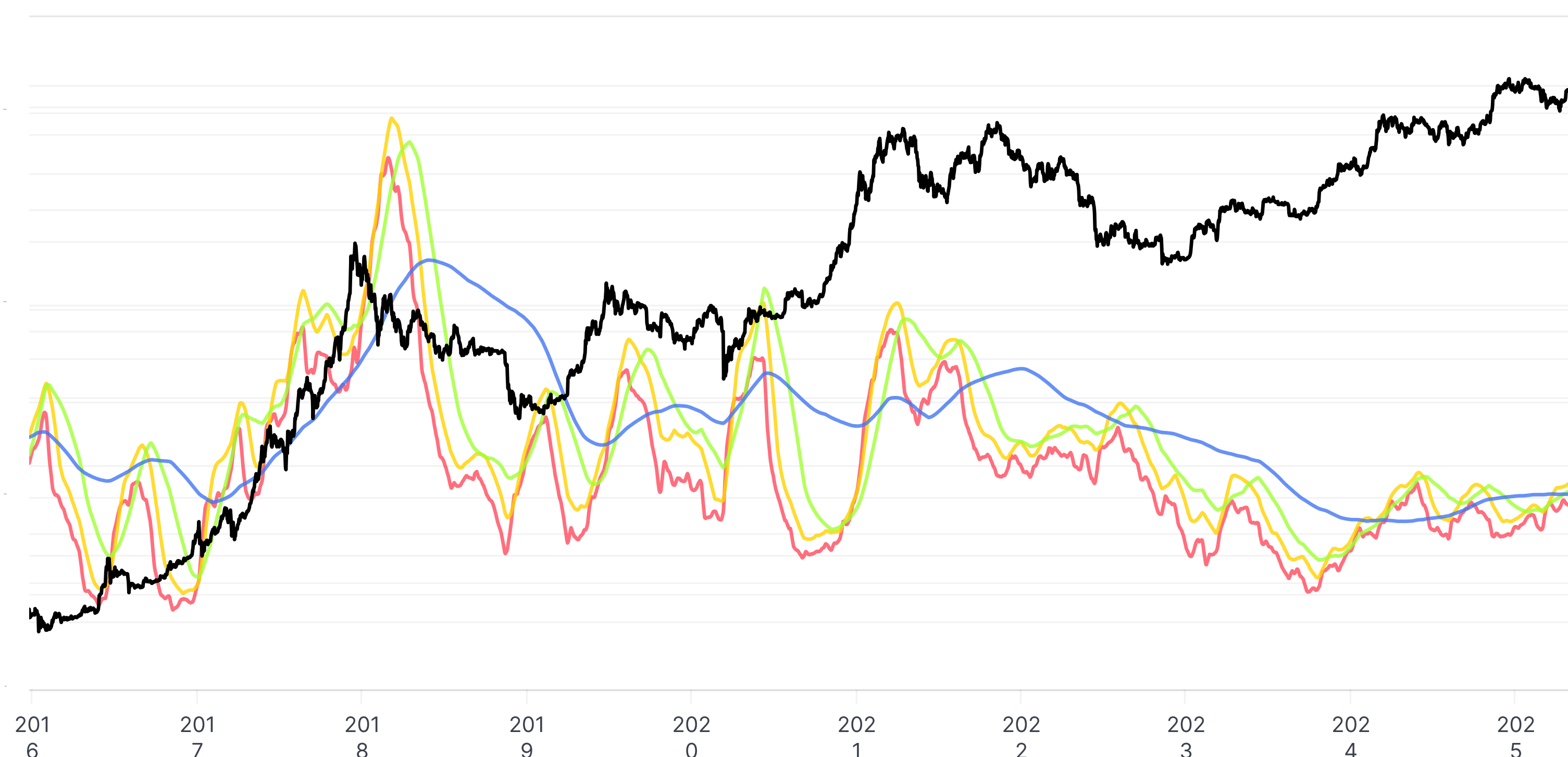
## Maturation & Growth Patterns



As bitcoin adoption expands across institutions, market behavior is becoming more stable, offering greater predictability and confidence for long-term investors.

BTC: Annualized Realized Volatility (All)

1 week 1 month 3 months 1 year BTC: Price [USD]



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With **30.9% of bitcoin's circulating supply** now held in centralized treasuries—including governments, ETFs, public companies, and centralized exchanges—the market has undergone a structural transformation toward **institutional maturity**. As adoption has broadened, particularly across sovereign and regulated financial entities, **annualized realized volatility across all time frames**—from 1-week to 1-year—has declined consistently since 2018. The launch of U.S. spot ETFs in early 2024 reinforced this trend, introducing steady capital inflows and improving liquidity depth. Although bitcoin remains a risk-on asset, its integration into traditional finance has made price action more reliable and less driven by speculative extremes.

Bitcoin: Price Performance Since Cycle Low

2011 to 2015 Cycle 2015 to 2018 Cycle 2018 to 2022 Cycle 2022 Cycle+



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This structural evolution has not eliminated upside, but has reshaped bitcoin's risk-return profile. Rather than explosive spikes, recent cycles have produced more sustained and orderly rallies. This consistency strengthens institutional confidence and positions bitcoin as a long-term macro asset, suitable for strategic allocation alongside traditional stores of value.



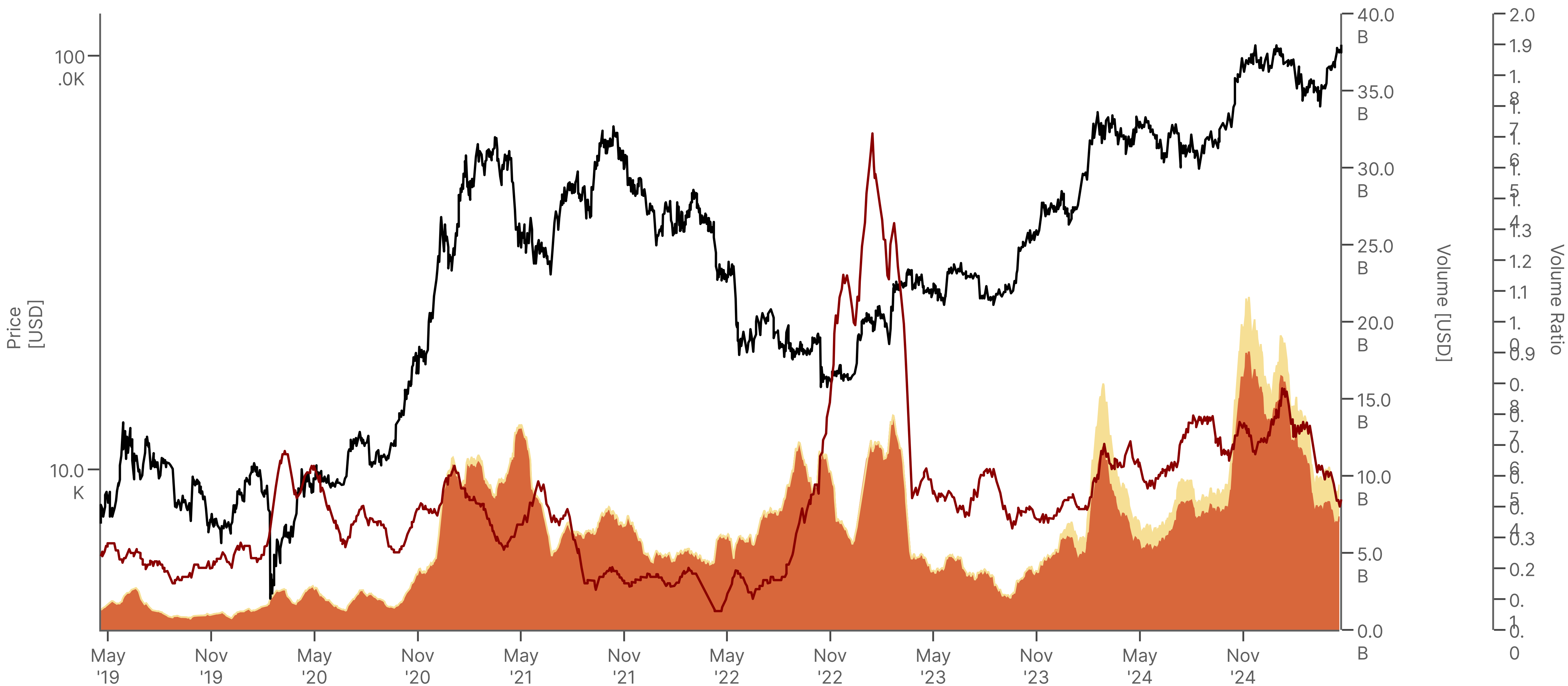
# The Institutional Shift to Offchain Markets

💡 The majority of bitcoin trading volume now flows through centralized exchanges, ETFs, and derivatives platforms—highlighting a structural shift driven by institutional adoption.

As institutional players have entered the space, bitcoin market activity has increasingly migrated from onchain settlement to offchain infrastructure. Centralized exchanges, U.S. spot ETFs, and regulated derivatives platforms now account for the majority of trading volume, serving as the primary venues for both liquidity provision and risk management.

Off-Chain vs On-Chain Volume

● Bitcoin Price (USD) ● Off-Chain To On-Chain Ratio ● ETF Trading Volume ● Spot Trading Volume





## The Institutional Shift to Offchain Markets continued

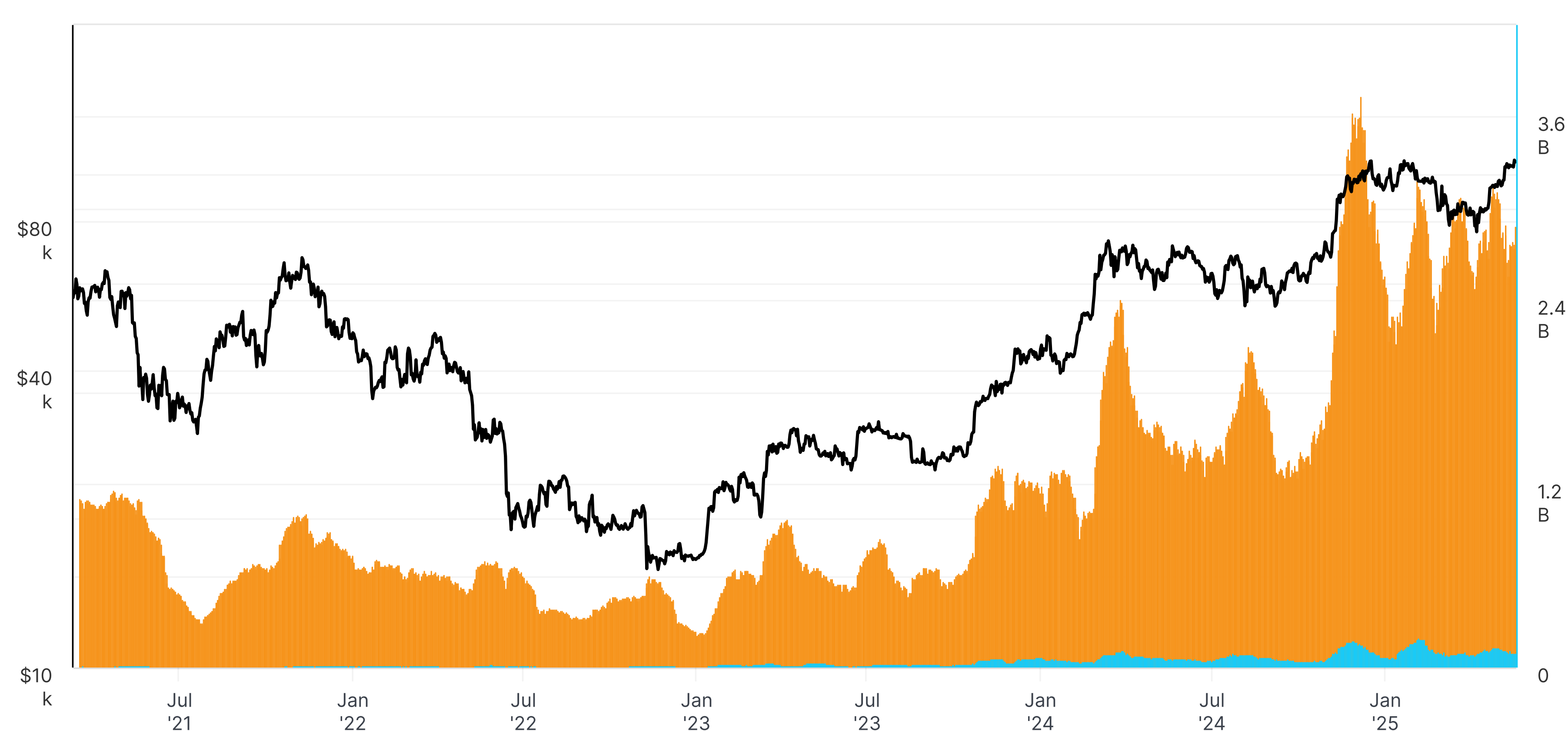
Since 2017, the share of bitcoin-related activity occurring offchain has steadily grown. As of 2025, centralized exchanges and ETFs facilitate over 75% of adjusted transfer volumes, while derivatives markets—especially CME options and futures—have expanded more than tenfold since 2023 as measured by open interest and volume. This surge reflects institutional demand for scalable, regulated instruments to express directional views and hedge exposure.

While these platforms do not fully determine bitcoin's price, they have changed how the market functions. Liquidity is now deeper, trade execution is more standardized, and investor behavior increasingly resembles that of traditional financial markets.

This evolution marks a key phase in bitcoin's maturation. Institutional capital has introduced new dynamics, and understanding both offchain flows and onchain fundamentals is essential to navigating the modern bitcoin market.

### CME & Other Options Volume

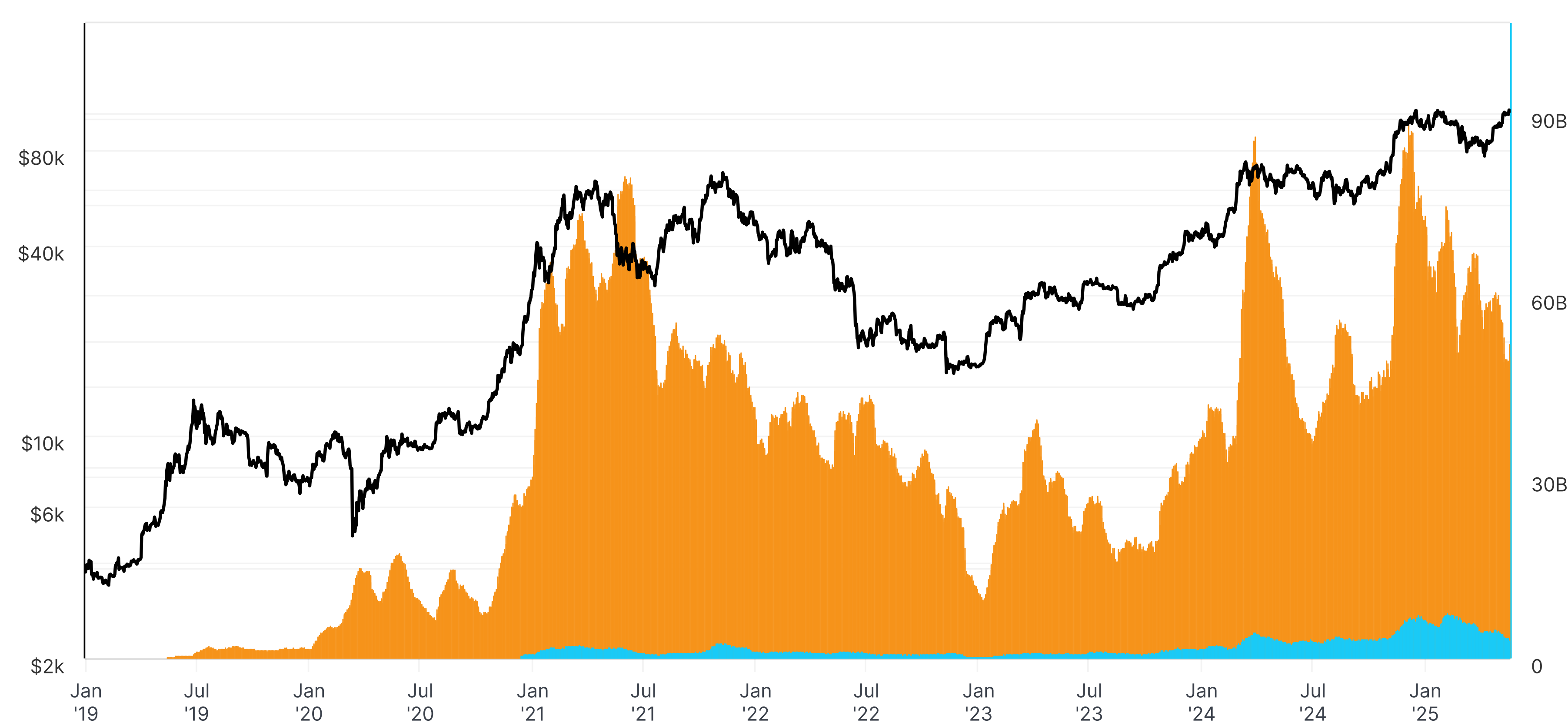
● BTC: Options Volume - All Exchanges [USD] ● BTC: Options Volume - CME [USD] ● BTC: Price [USD]



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### CME & Other Futures Volume

● BTC: Futures Volume - All Exchanges [USD] ● BTC: Futures CME Volume [USD] ● BTC: Price [USD]



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## Strategic Bitcoin Reserve (SBR) Impact Estimation: Public & Private Companies



The launch of the Strategic Bitcoin Reserve (SBR) has reshaped perception, transforming seized assets into sovereign reserves and catalyzing renewed institutional confidence in Bitcoin.

On **March 6, 2025**, President **Donald J. Trump** signed **Executive Order 14096**, titled “Establishment of the Strategic Bitcoin Reserve and United States Digital Asset Stockpile”. This order repurposed over **~200k BTC**, previously seized through criminal and civil asset forfeiture proceedings, into a federally managed reserve. The executive order explicitly states:

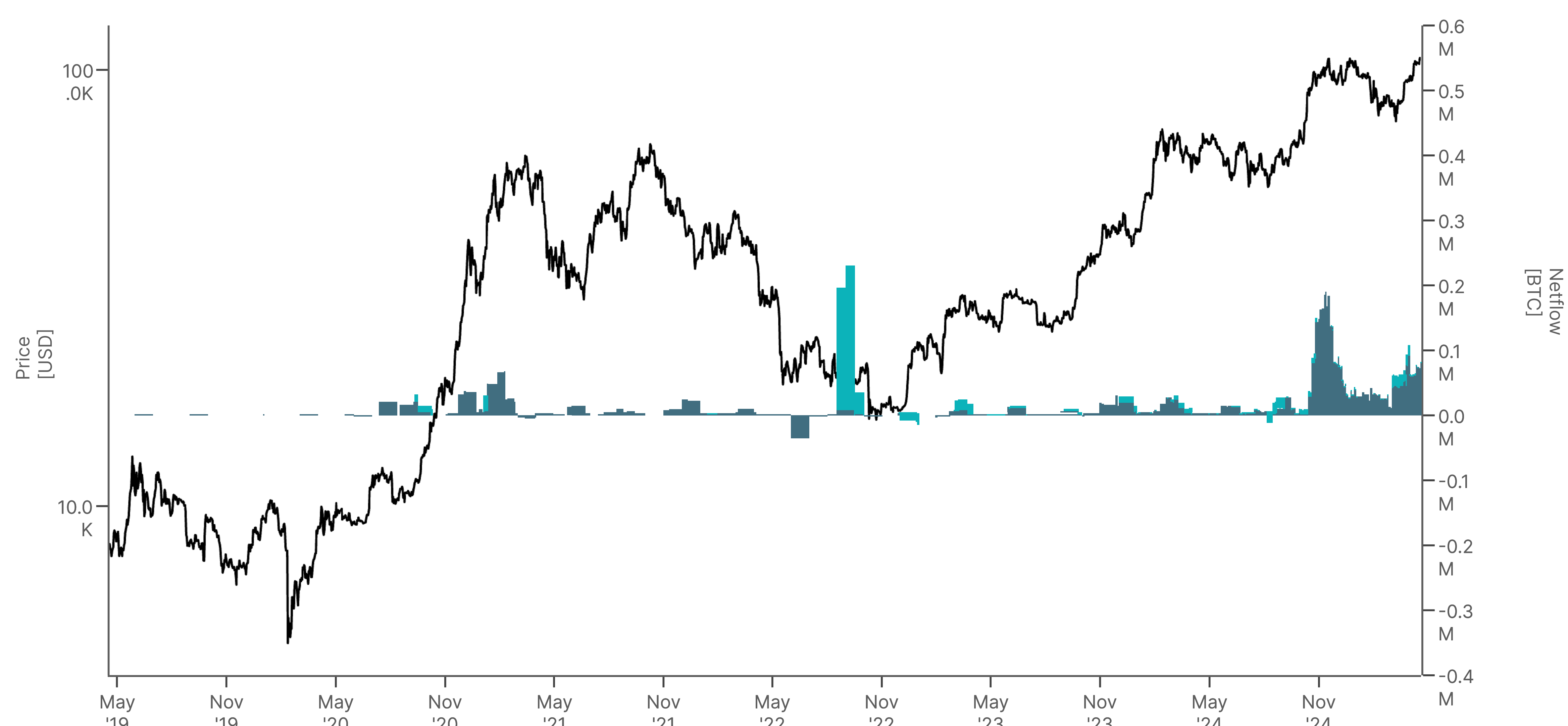
“The United States will not sell bitcoin deposited into this Strategic Bitcoin Reserve, which will be maintained as a store of reserve assets.”

While the reserve currently comprises only confiscated assets, the order authorizes the Treasury and Commerce Departments to develop **budget-neutral strategies** for acquiring additional bitcoin, provided these strategies impose no incremental costs on American taxpayers.

The establishment of the SBR could bolster confidence across various sectors. Notably, following the announcement, public and private companies began accumulating over 20,000 BTC per month, marking one of the most aggressive institutional inflow periods since 2021. This surge suggests that the SBR's formal recognition of bitcoin as a strategic asset has bolstered institutional confidence, encouraging entities to view bitcoin as a legitimate component of their treasury reserves.

### Treasury 30D-Netflow by Entity Type [BTC]

● Bitcoin Price (USD) ● Private Companies 30D-Netflow ● Public Companies 30D-Netflow





## SBR Impact Estimation: Market Cap Multiplier



Each dollar deployed into bitcoin can move the market by \$1.70 over time—  
or up to \$25 in the short term—depending on timing, volatility, and conviction.

The Strategic Bitcoin Reserve (SBR) underscores a core dynamic in bitcoin markets: capital inflows are highly reflexive. That is, the market value tends to rise by more than the actual capital invested, particularly during periods of elevated demand and volatility.

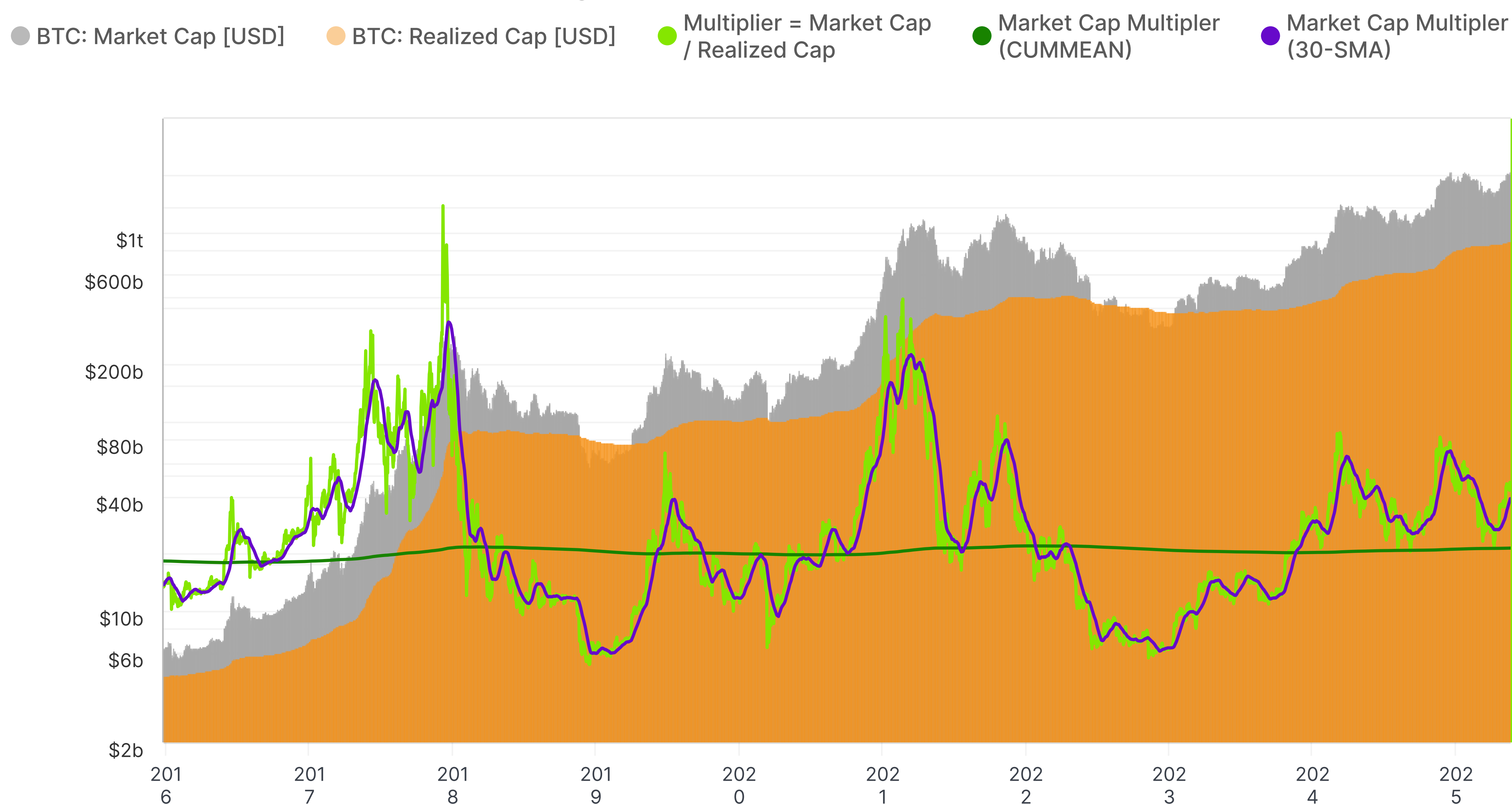
This effect is quantified through the **Market Cap Multiplier (MCM)**—the ratio of change in market capitalization to net realized capital inflows. Using this framework, we estimate the short-term and long-term MCM under both bull and bear market conditions:

- **Cyclical MCM**, varies significantly with trend momentum, ranging between:
  - ~0.7 in bear markets: every \$1 of inflow, if held until the next bear market, leads to increasing market cap by just \$0.70
  - ~3.7 in bull markets: every \$1 of inflow, if held until the next bull market, results in increasing market cap by up to \$3.70.
- **Ultimate MCM**, when measured cumulatively from Bitcoin's Genesis block, stabilizes around:
  - ~1.7, implying that each \$1 permanently deployed into BTC has historically resulted in ~\$1.70 residue in market cap.

For short-term impacts, the 30-day MCM can range from near-zero to **25x**, especially during high-volatility periods. On average, the **short-term multiplier is ~8x**, meaning \$1 of capital can briefly move the market by \$8.

These dynamics are particularly relevant for sovereign allocators. Even passive SBR activity can amplify price through both liquidity effects and psychological signaling. This framework also aligns with valuation models like **MVRV**, supporting the view that conviction, not just capital, drives long-term impact.

### Bitcoin Market Cap Multiplier (Long-Term)

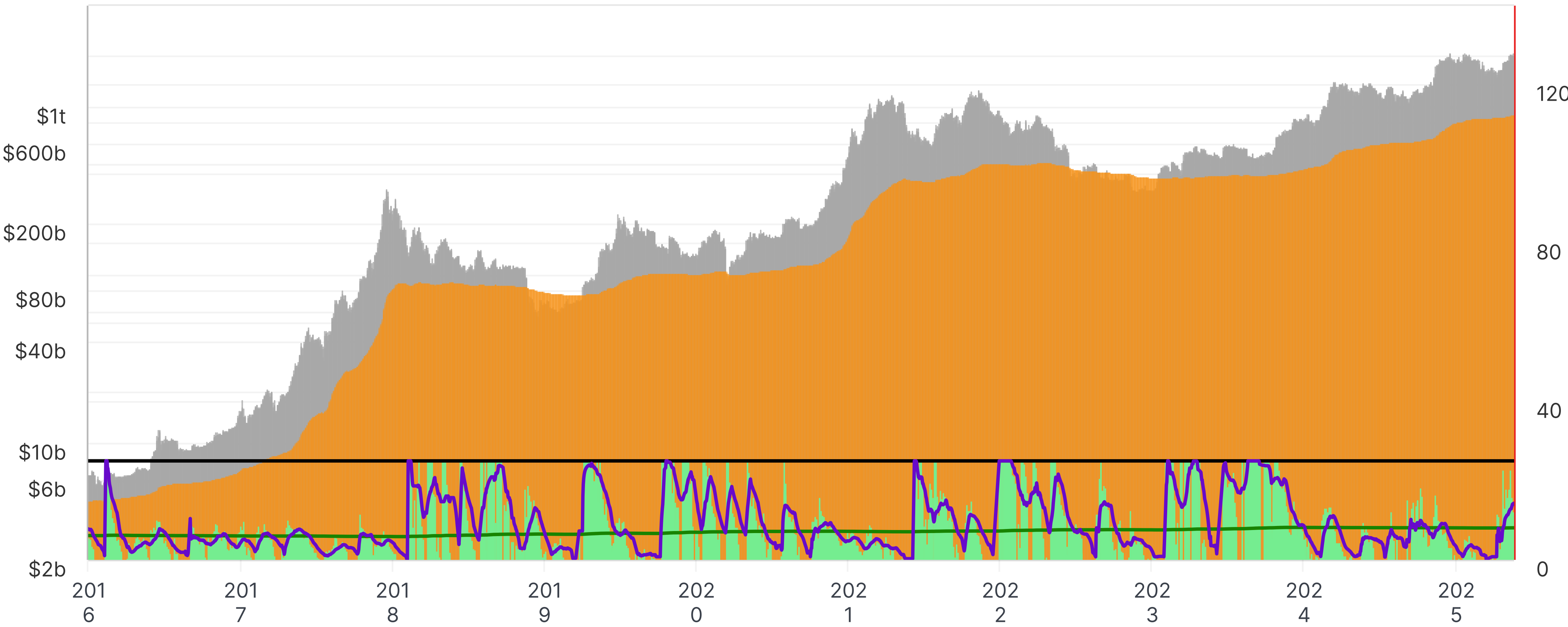


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# SBR Impact Estimation: Market Cap Multiplier continued

Bitcoin Market Cap Multiplier (Short-Term)

● BTC: Market Cap [USD]    ● BTC: Realized Cap [USD]    ● Multiplier [Capped] > 0    ● Market Cap Multiplier Cumulative    ● Multiplier Band    ● Multiplier (30D-SMA)



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## SBR Impact Estimation: Conclusion

The establishment of the U.S. Strategic Bitcoin Reserve marks a defining moment in bitcoin's institutional trajectory. With over 30% of circulating supply held by centralized entities—including exchanges, ETFs, corporations, and sovereign treasuries—the market is undergoing a structural transformation driven by long-term capital and strategic custody.

While holdings remain concentrated among early adopters, the symbolic endorsement of bitcoin as a sovereign-grade asset has catalyzed renewed institutional confidence. Rather than shrinking, the total supply available for spot trading has remained stable as assets shift from exchanges to ETFs and other custodians.

At the same time, as realized volatility has declined in recent years, and price cycles have become more stable—further reinforcing bitcoin's appeal to large, risk-aware investors. Offchain trading venues now account for the majority of volume, underscoring the need for hybrid analysis that includes both onchain fundamentals and offchain flows.

Crucially, the reflexive nature of capital deployment into bitcoin magnifies its market impact. For sovereign allocators like the SBR, each \$1 invested has the potential to generate up to \$25 in short-term market cap expansion—and ~\$1.70 in long-term structural value.

The SBR may hold seized assets today, but its presence has validated bitcoin's role in modern reserve strategy. As institutional adoption continues, its influence will scale, not only through holdings, but through the frameworks investors use to value and integrate bitcoin into global financial architecture.



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