BLOCKWARE

Bitcoin Matures:

THE END OF FOUR-YEAR CYCLES

Bitcoin is transitioning from a retail-driven, boom-and-bust asset to a macro asset class driven by institutional capital. This report analyzes the data behind the evolving phase shift.

Sept 2025

Executive Summary

Bitcoin is undergoing a structural transformation from a speculative, retail-driven asset into a mature institutional-grade macro asset. The launch of U.S. spot ETFs in January 2024 marked the start of the “Institutional Era,” complemented by the rise of Bitcoin Treasury Companies and other securitized investment products. These developments are compressing volatility, deepening liquidity, and reshaping how capital flows into the network.

The old four-year halving cycle no longer defines Bitcoin’s price dynamics. Because newly mined coins now represent only a negligible share of total supply, halvings have little impact on Bitcoin’s supply-demand balance. Instead, Bitcoin’s trajectory will be dictated by net new capital inflows — through ETFs, treasuries, and financial products — rather than mechanical supply shocks.

Bitcoin is following a pattern similar to other digital monopolies such as Amazon, Apple, and Google. Each experienced early hyper-volatility, parabolic returns, and devastating drawdowns before settling into more stable, compounding growth as adoption expanded and investor bases institutionalized. The same lifecycle is now visible in Bitcoin: still volatile compared to traditional assets, but increasingly stable relative to its own history.

This report presents a data-driven analysis of Bitcoin’s regime shift since 2024, highlighting how realized cap multiples, volatility profiles, and residual spreads have compressed. Together, these metrics confirm that Bitcoin is maturing: volatile compared to equities and bonds, but no longer subject to hyper-cyclical boom-and-busts. The implication is clear: Bitcoin’s next phase will be defined by sustained institutional adoption and the scale of capital inflows.

Key Takeaways

The ETF Era Marks a Structural Shift
Since January 2024, Bitcoin's volatility, profit-taking patterns, and drawdowns have compressed dramatically, reflecting a shift from retail-driven booms and busts to institutional-grade market behavior.

Drawdowns Are No Longer Catastrophic
Post-ETF, Bitcoin's largest drawdown has been ~30%, compared to five separate pre-ETF collapses of -70% or more. signaling the end of hyper-cyclical busts.

Diminishing Realized Cap Multiples & Residuals
Inflows into Bitcoin's realized cap now translate into predictable, proportional increases in market cap, proving the market has become more efficient and less reflexive.

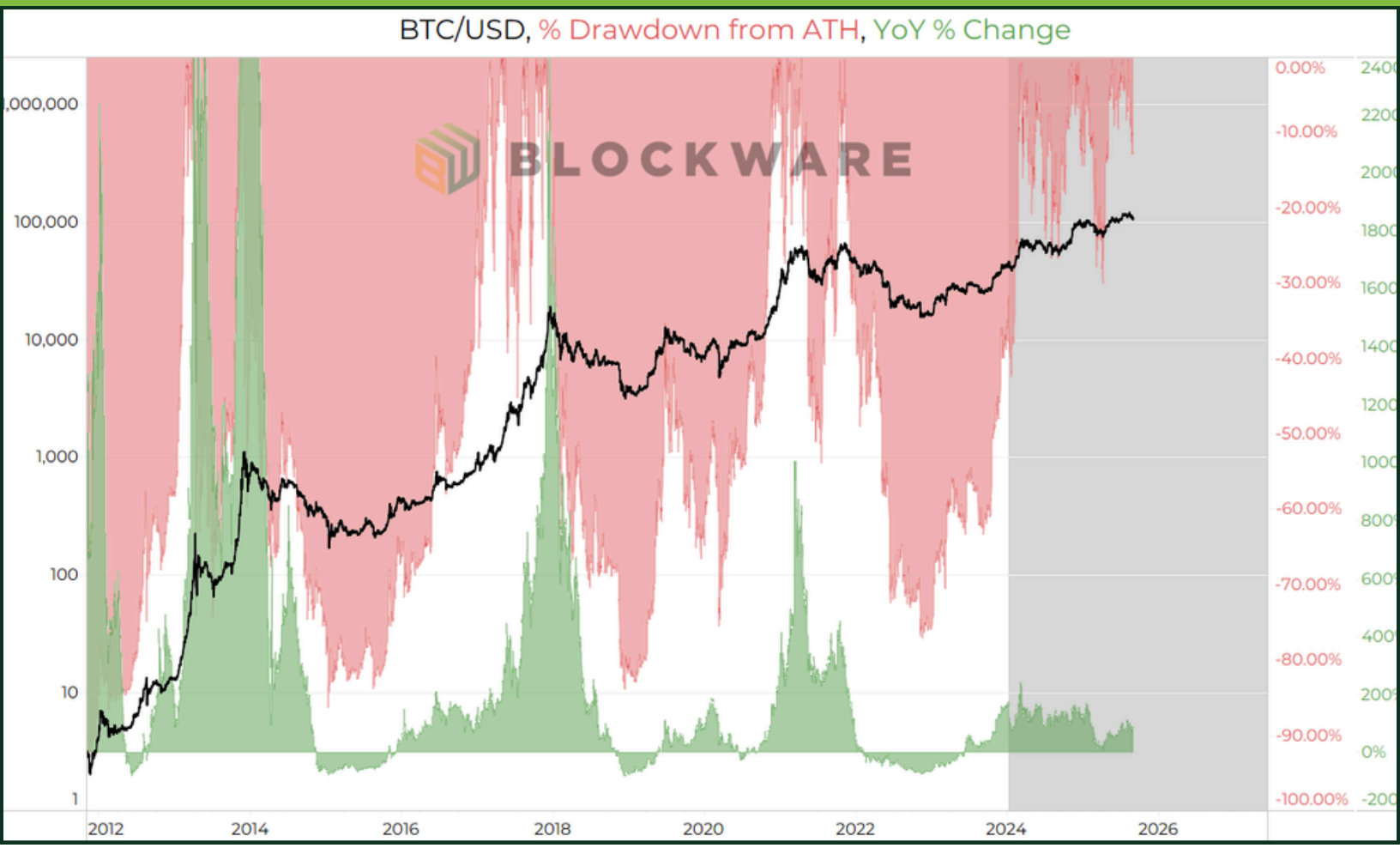
Halving Cycles Have Lost Their Edge
The 2024 halving reduced issuance by just 0.002% of supply, a negligible impact compared to earlier cycles; halving-induced supply dynamics are no longer the primary catalyst of Bitcoin's price action.

Bitcoin Mirrors the Path of Other Digital Monopolies
Like Amazon, Apple, and Google before it, Bitcoin's extreme early volatility is giving way to stability as adoption grows and the market institutionalizes.

Future Price is a Function of Inflows and Multiples
With realized cap inflows of ~$420B in the past 12 months, a 4-year projection implies BTC reaching ~$219K–$310K based on sustainable MVRV multiples of 1.8–2.5

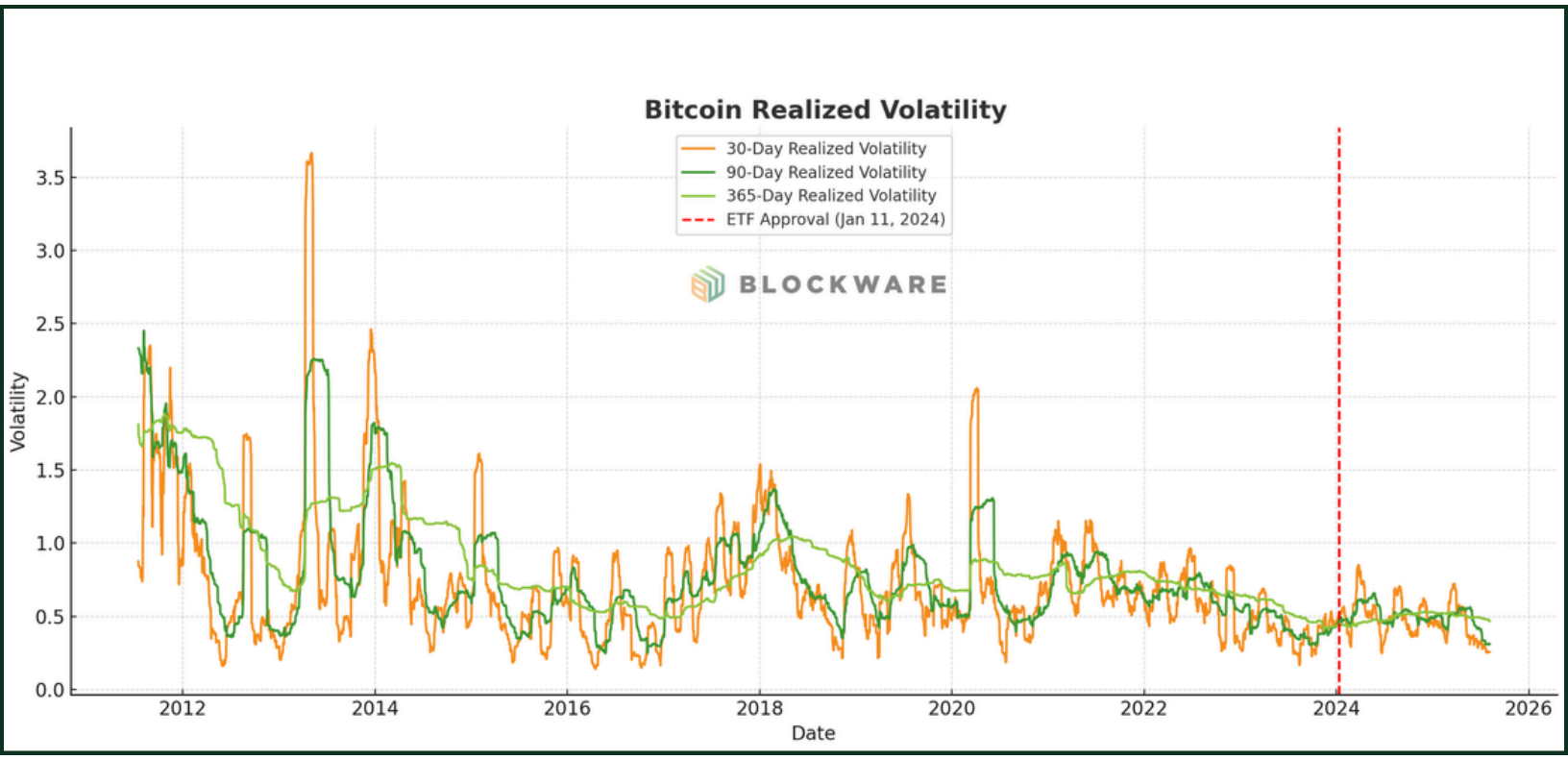
Section 1

Differences in Price, Volatility, and Profit Taking (Pre-ETF vs. Post-ETF)

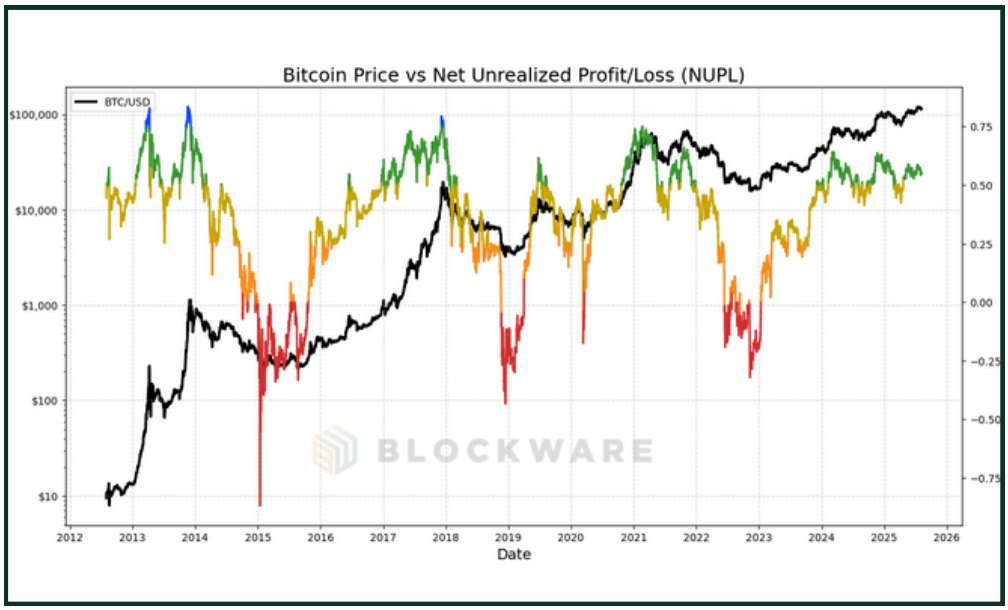


Bitcoin's pre-ETF era (2010–2023) was defined by retail-driven cycles. Price was highly reactive to speculative demand, "halvings", and exogenous shocks. This created exponential parabolic advances followed by -70% to -85% drawdowns. Annualized realized volatility frequently exceeded 150%, with profit-taking often clustered around price tops as liquidity was thin and investor behavior highly correlated.

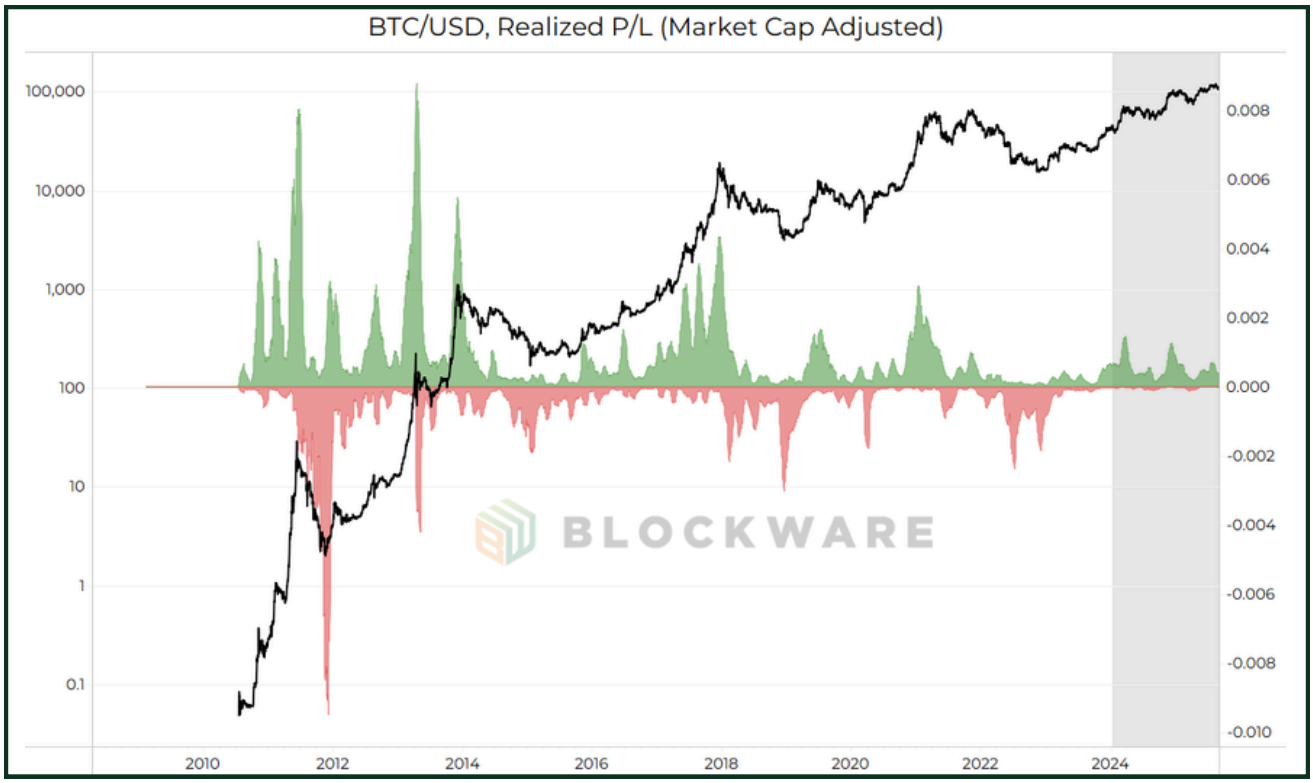
Since January 2024, when U.S. spot ETFs launched, the landscape has shifted dramatically. Realized volatility across 30D, 90D, and 365D windows has compressed materially, while profit-taking spikes are less violent relative to prior cycles. On the other side of the coin, drawdowns are far milder. **BTC's largest "peak to trough" dip in the ETF era is a mere 30%** (~$106,000 to ~$76,000). This is far less nauseating than the 5 instances in the pre-ETF era in which BTC declined by 70% or more.



On-chain data indicates that investors in the ETF era will realize profits at much lower multiples compared to the pre-ETF era. **The "Net Unrealized Profit/Loss Multiple" has oscillated between 45 and 65% post-ETF – indicating that dips are quickly bought and pumps are quickly sold.**

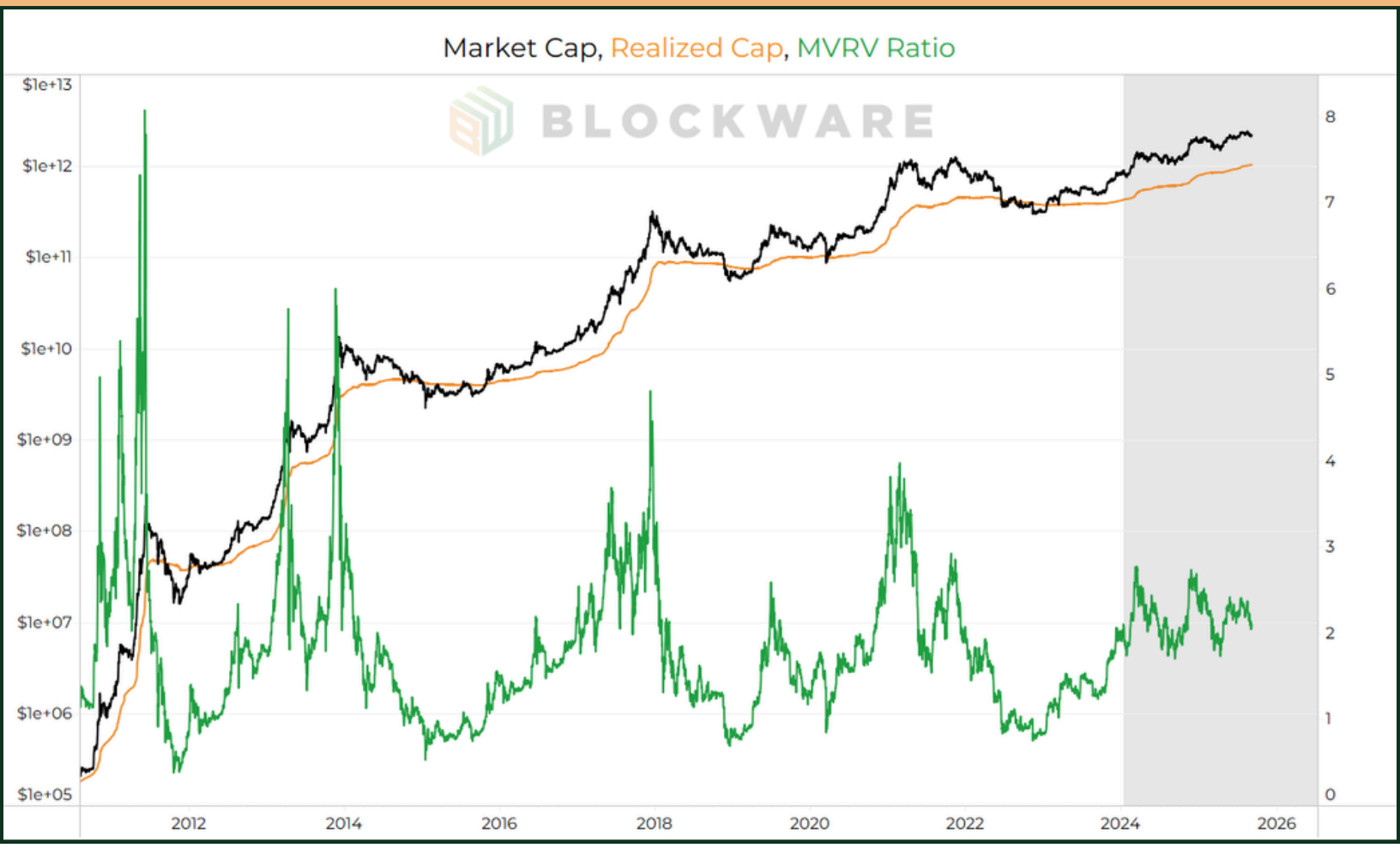


A similar pattern of behavior can be observed when looking at on-chain realized profit and loss. This is calculated by measuring the difference in price from the time a UTXO is created to the time it is moved on-chain. On a market-cap adjusted basis, "realized profits" are consistently lower post-ETF. That said, they are also consistently positive; unlike the pre-ETF era in which coins frequently moved at a lower price than that at which they were acquired.



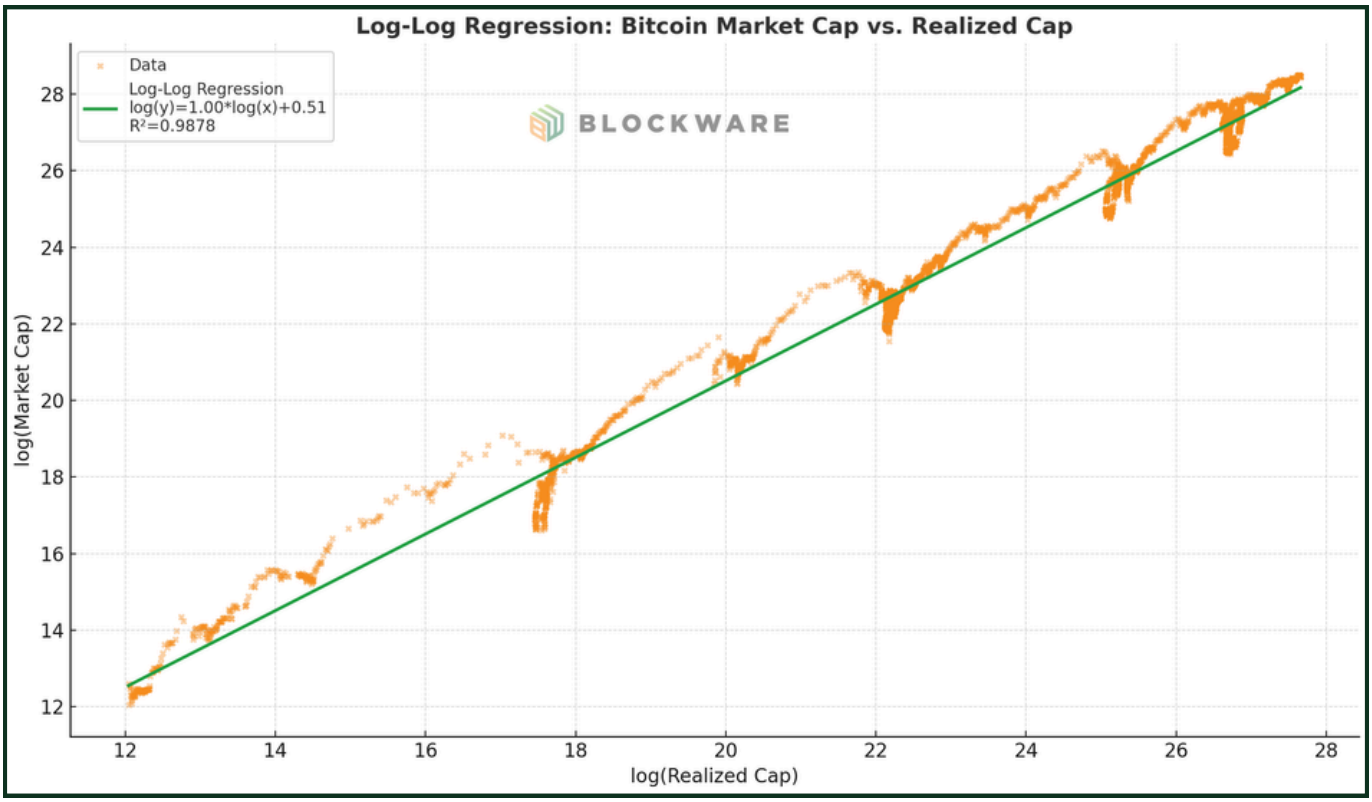
Section 2

Diminishing Realized Cap Multiple



One of the clearest quantitative markers of Bitcoin's maturing market is the decline in its Realized Cap multiple (Market cap ÷ Realized cap). 'Realized Cap' is the most accurate measure of "capital inflows" into BTC. It's calculated by adding up the dollar value of each UTXO based on the price at which it was created. In other words, the price of all BTC based on when each coin last moved. 100 BTC last moved on-chain at $100,000 accounts for 100x more Realized Cap than 100 BTC moved at $1,000.

In earlier cycles, Bitcoin's Market Cap regularly reached extremes of 4 to 8x Realized Cap during euphoric peaks; indicating a hyper-reflexive price response to new capital inflows. **Each successive 'cycle' has shown lower highs in the MVRV Ratio**, 2011 exceeded 8x, 2013 6x, 2017 peaked near 5x, and 2021 topped out around 4x. Post-ETF, the MVRV Ratio has consistently oscillated between 1.7x and 2.7x.



A log-log regression of Realized Cap vs Market Cap has a slope of 1, indicating that a 1% increase in Realized Cap results in a 1% increase in Market Capitalization. Unsurprisingly, the introduction of new capital results in a corresponding increase in market capitalization. Moreover, an R^2 of 0.98 confirms extremely strong explanatory power.

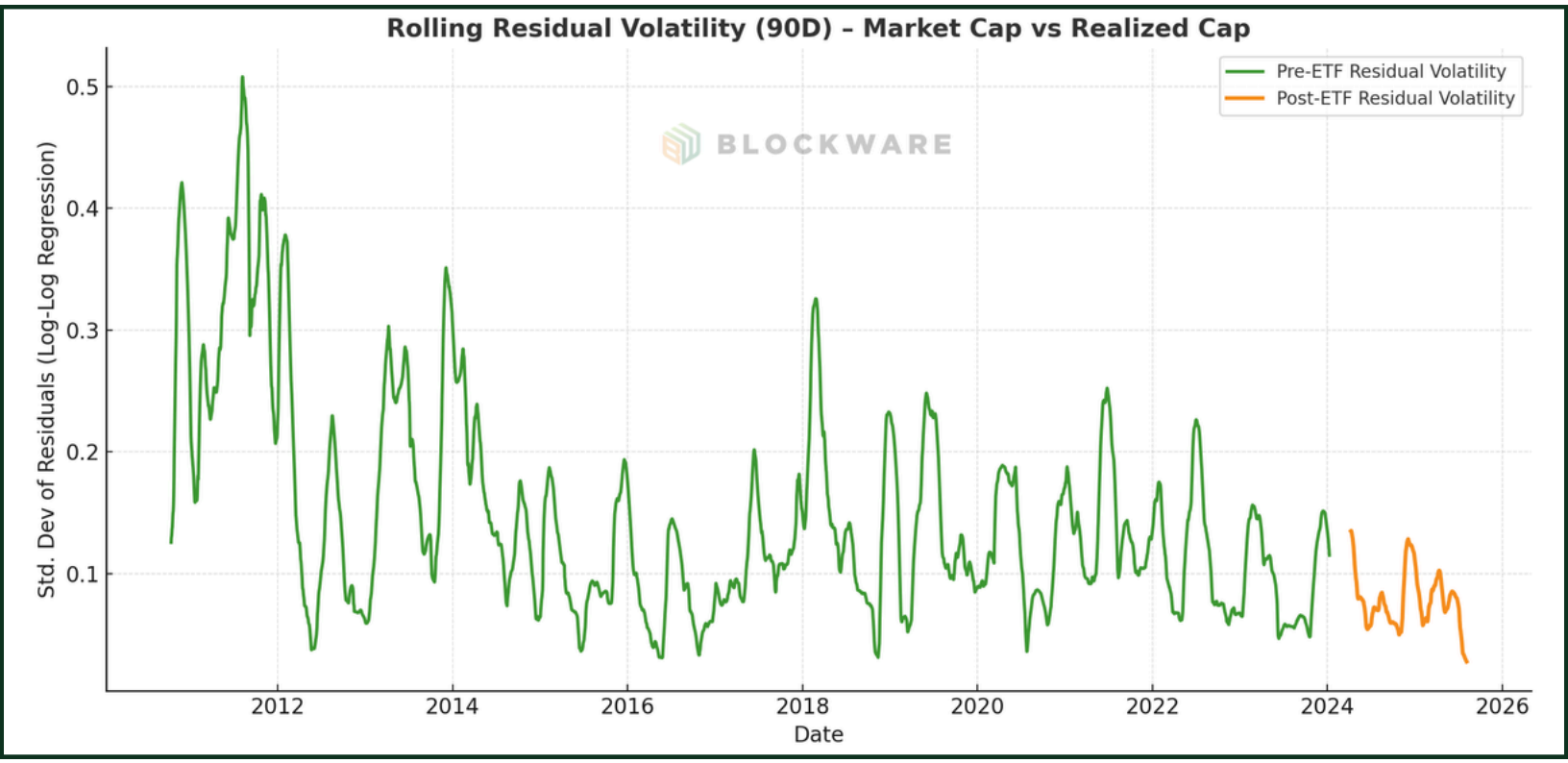
What's interesting, however, is how this regression has evolved over time...

Rather than a series of short-term boom-and-busts in response to a rising realized cap, the post-ETF response has been far more predictable, while still boasting a strong long-term correlation. In other words, the market response to liquidity inflows is now more predictable. This is evident by a decline in residual volatility.

Actual Market Cap – Predicted Market Cap

= Residual

Realized Cap has always been a solid long-term predictor of Market Cap, but there was a much larger short-term variance in residuals pre-ETF. The immature, retail driven market of Bitcoin's first 15 years saw high volatility in its reaction to new capital inflows. **Residual volatility is much lower in the ETF era, indicating a more predictable reaction to capital inflows – no more booms and busts.**



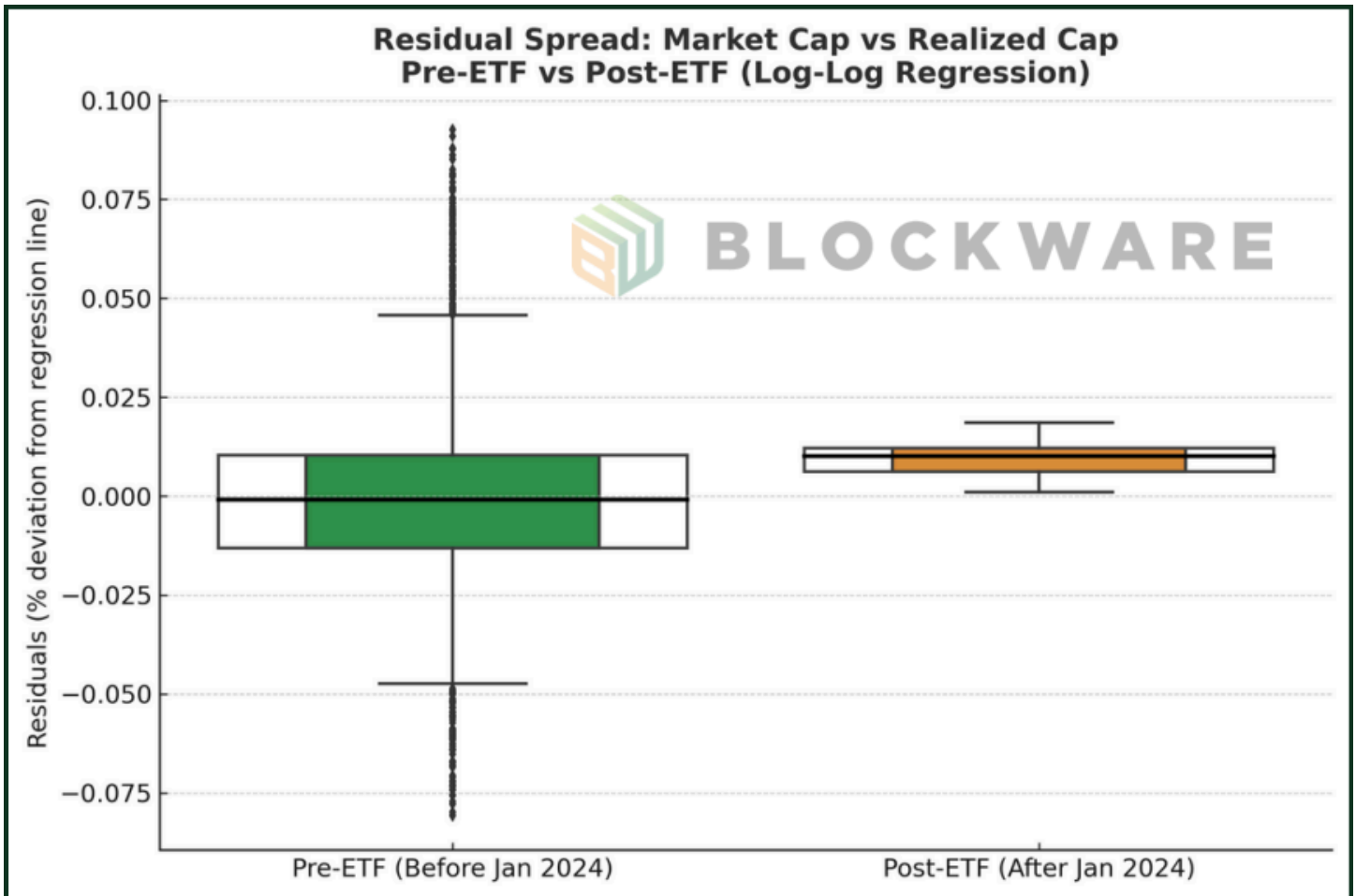
A box and whiskers plot of the residual spread helps us visualize this further.

Pre-ETF (green box):

- Residuals have a much wider interquartile range (IQR) and longer whiskers, showing larger deviations from the regression line.
- Indicates an immature, retail-driven market with significant over- and under-shooting relative to realized cap.

Post-ETF (orange box):

- Residual spread is noticeably tighter, with fewer and smaller outliers.
- Confirms the thesis that, **post-ETF, the RC → MC relationship has become steadier and more predictable.** This chart quantifies and visualizes market stability; price deviates less from capital inflows.

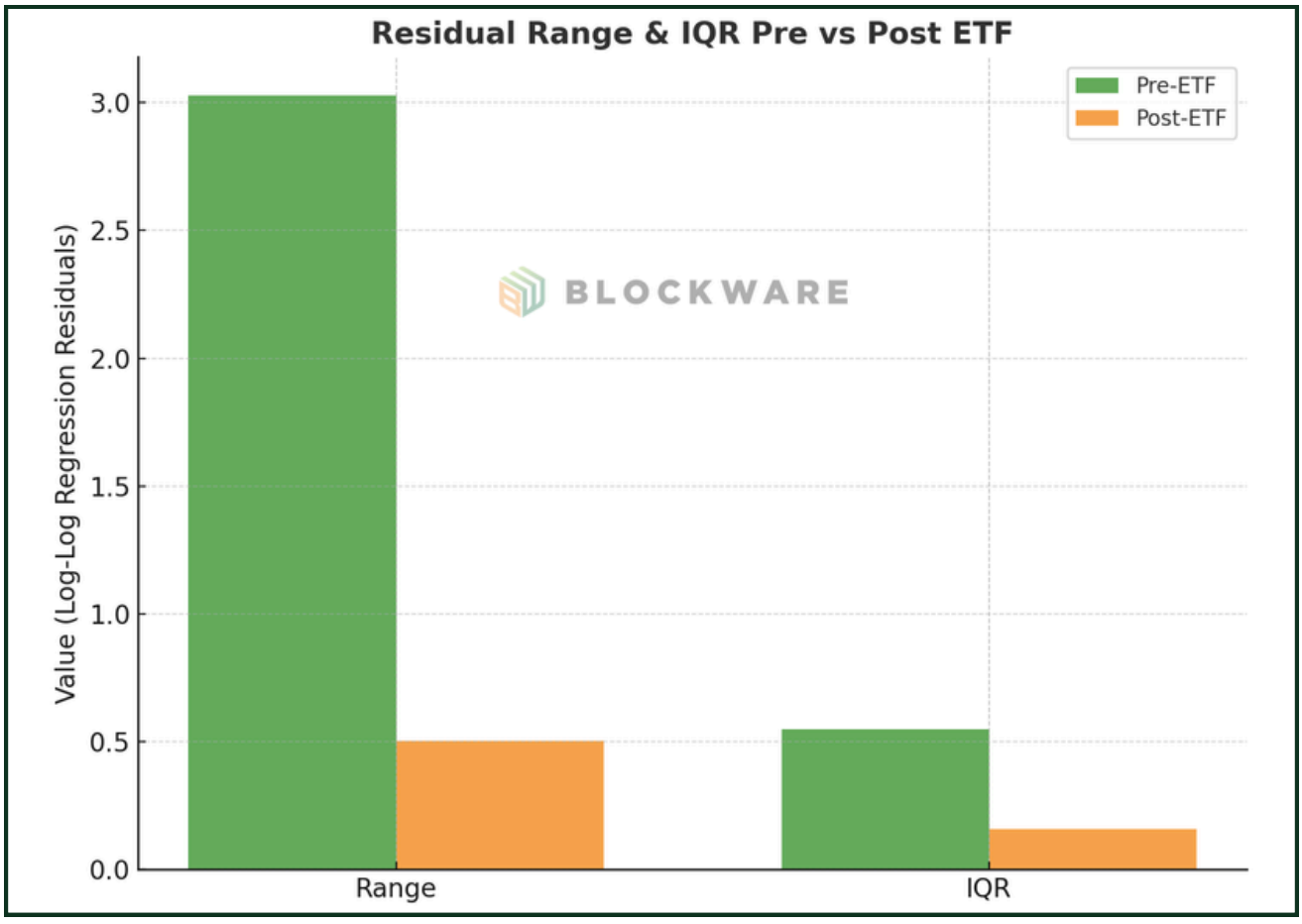


	Median	IQR	Min	Max
Pre-ETF	-0.08%	2.35%	-8.10%	9.30%
Post-ETF	1%	0.58%	0.10%	1.90%

The bar chart provides another lens on the residual distribution, comparing both the overall range (max–min) and the interquartile range (IQR) of deviations. Pre-ETF (green bars), the residuals show an extremely wide range of ~3.0, reflecting dramatic blow-off tops and capitulation events where market cap diverged sharply from realized cap.

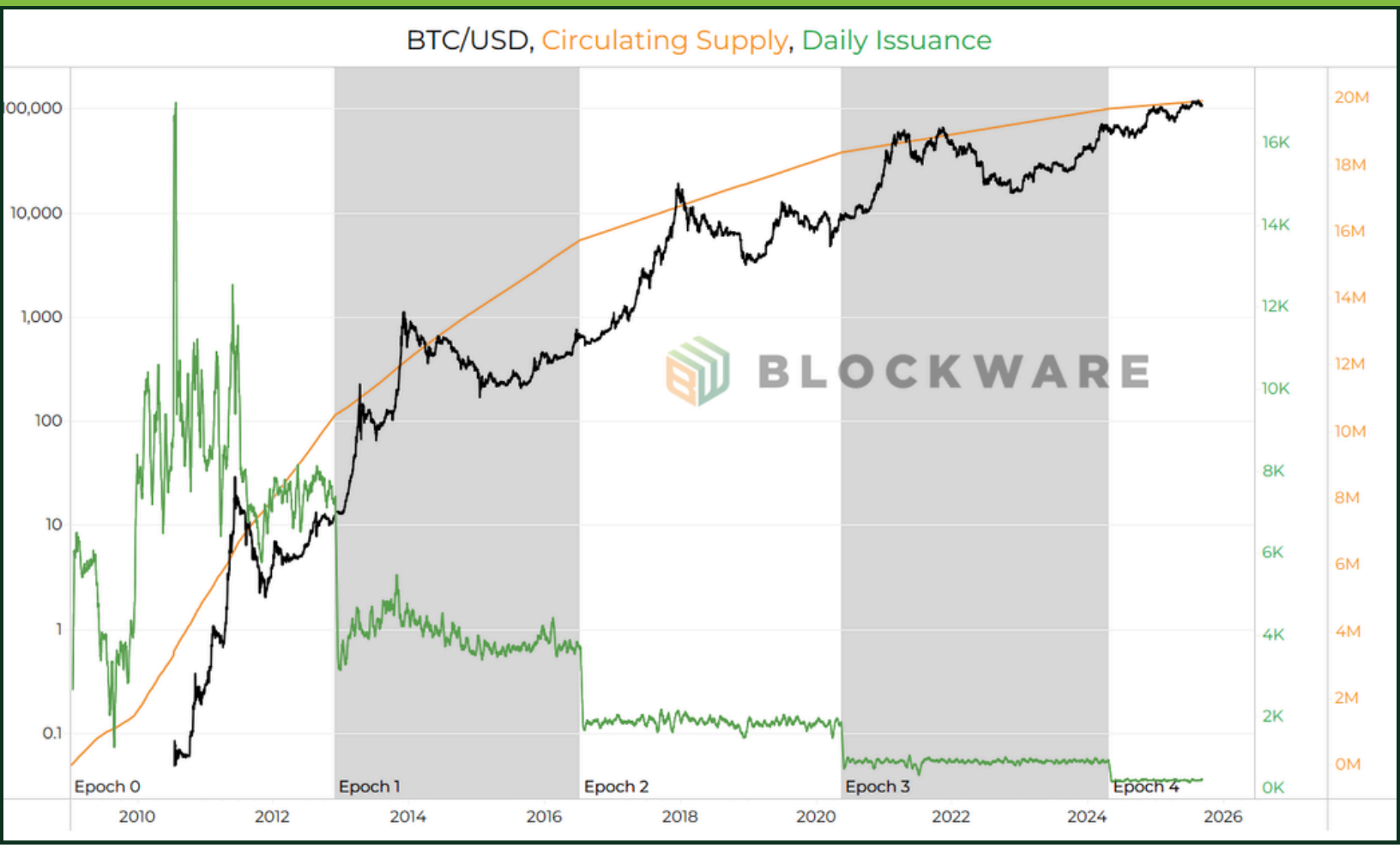
The IQR was also much larger at ~0.55, underscoring that even the “typical” deviations were noisy and unstable. Post-ETF (orange bars), both metrics compress substantially: the residual range shrinks to ~0.50 (an 83% reduction), while the IQR tightens to ~0.16 (a 71% reduction).

This indicates not only are extreme outliers much less common, but the everyday variance around the RC → MC relationship has tightened as well. Taken together, the chart quantifies a structural shift: **Bitcoin’s market now behaves with significantly reduced dispersion, aligning more closely with underlying capital inflows.**



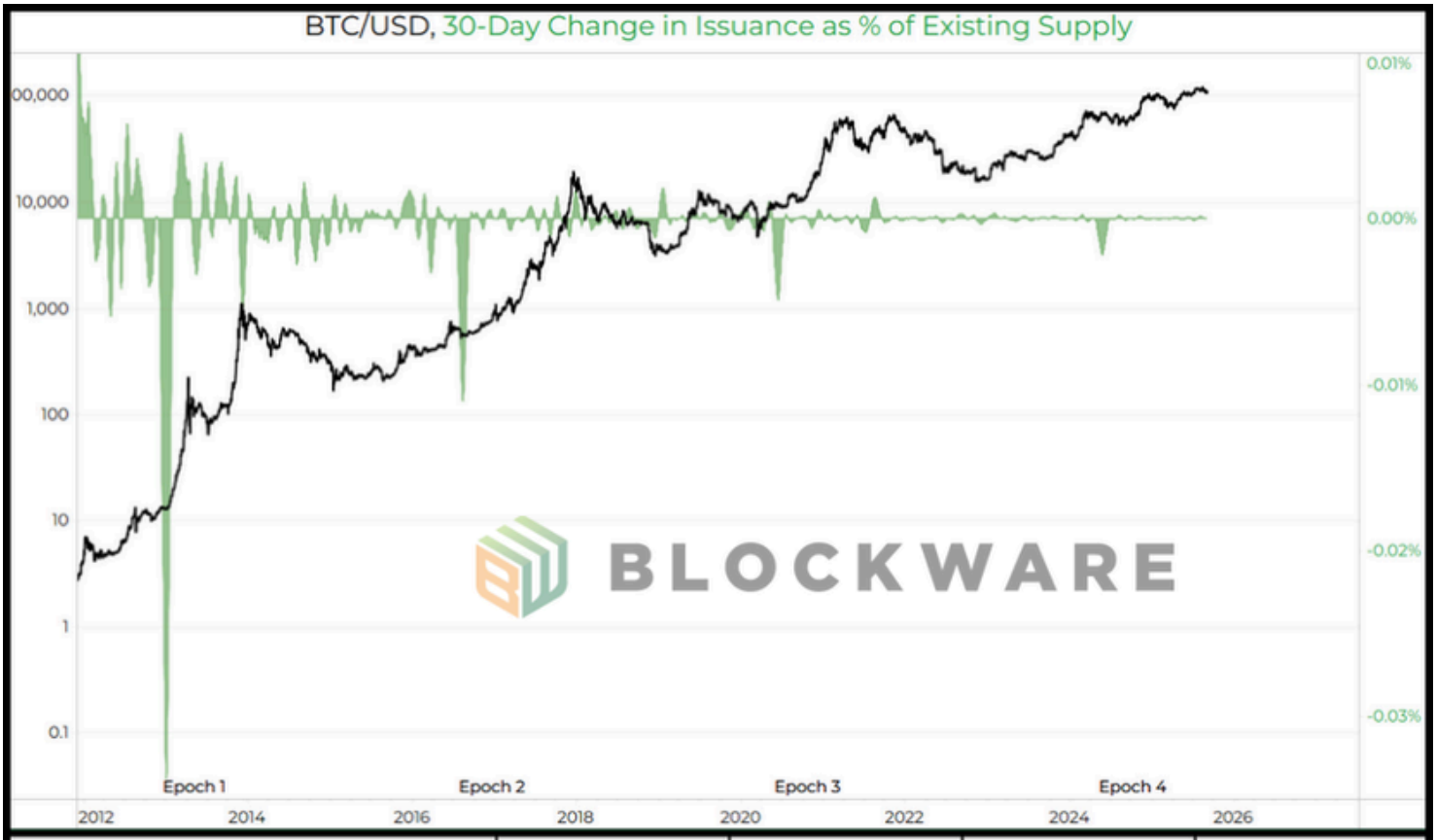
Section 3

Diminishing Impact of Halving



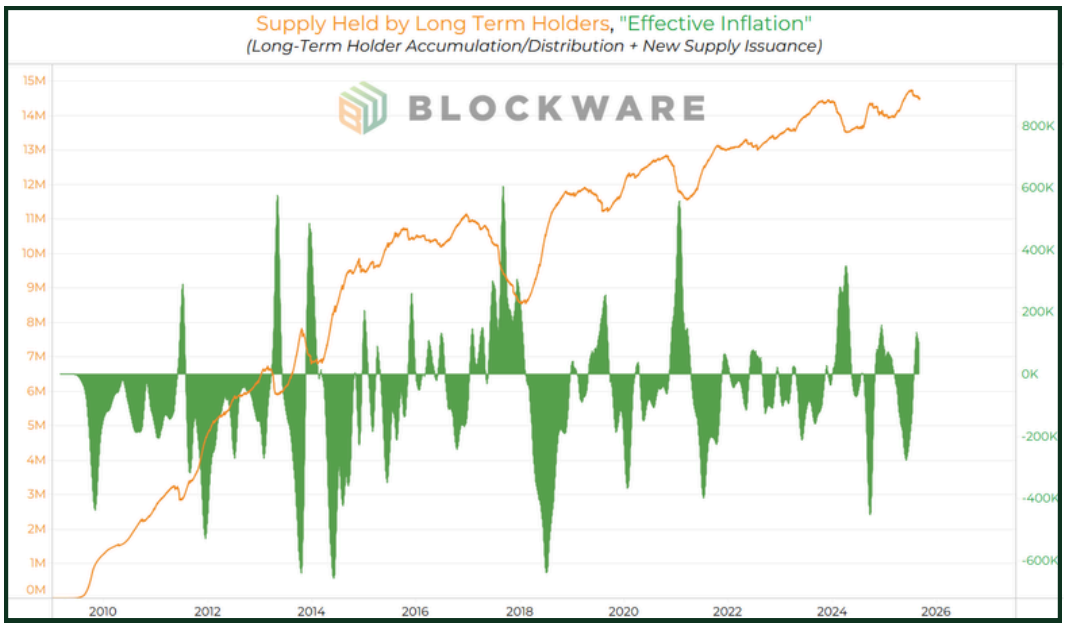
The fundamental belief surrounding Bitcoin's 4-Year Cycles is that parabolic booms (and subsequent busts) are catalyzed by the quadrennial 'halvings.' This is an event in which the amount of new BTC entering the market via mining is cut in half. These events will take place every four years until ~2140 at which point all ~21,000,000 BTC that will ever exist will be in circulation.

The **diminishing marginal impact of a decrease in new supply issuance relative to the amount of BTC already in circulation** poses a problem for those who anticipate the continuation of a 4-year BTC Cycle. The chart below measures the diminishing relative impact that BTC halvings have on supply.

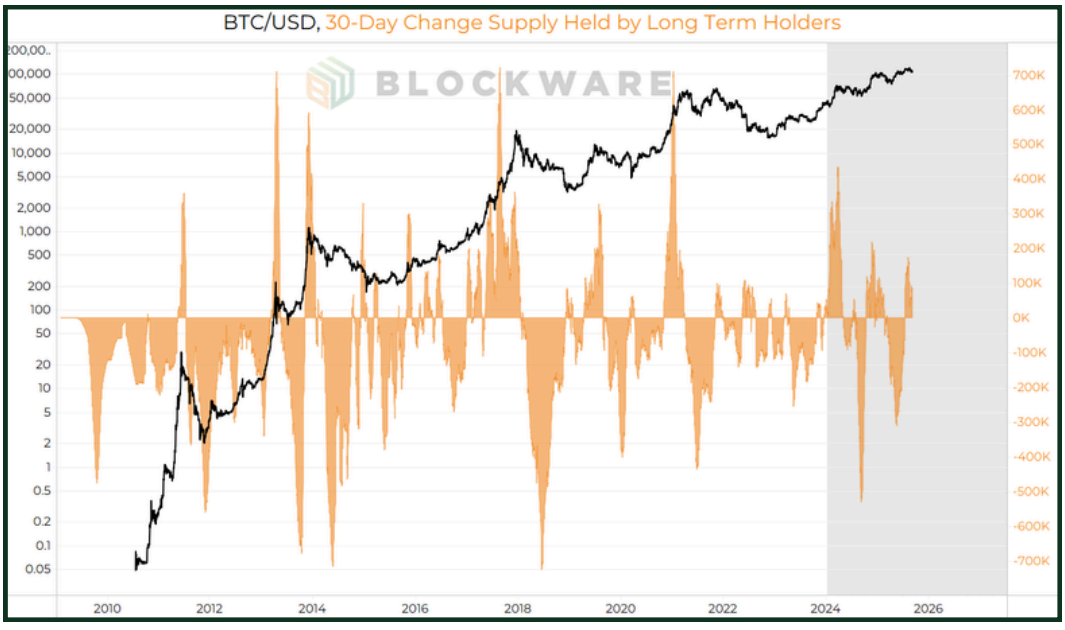


Year	2012	2016	2020	2024
Change in Issuance as % of Supply	-0.030%	-0.010%	-0.005%	-0.002%

During the ETF-era, long-term holders have provided more supply to the market than BTC miners. Bitcoin's difficulty adjustment ensures that additional resources allocated to Bitcoin mining does not result in an increase in supply creation. As such, the primary method through which new demand "finds supply" is by bidding the price higher until existing Bitcoin holders distribute coins into the market.

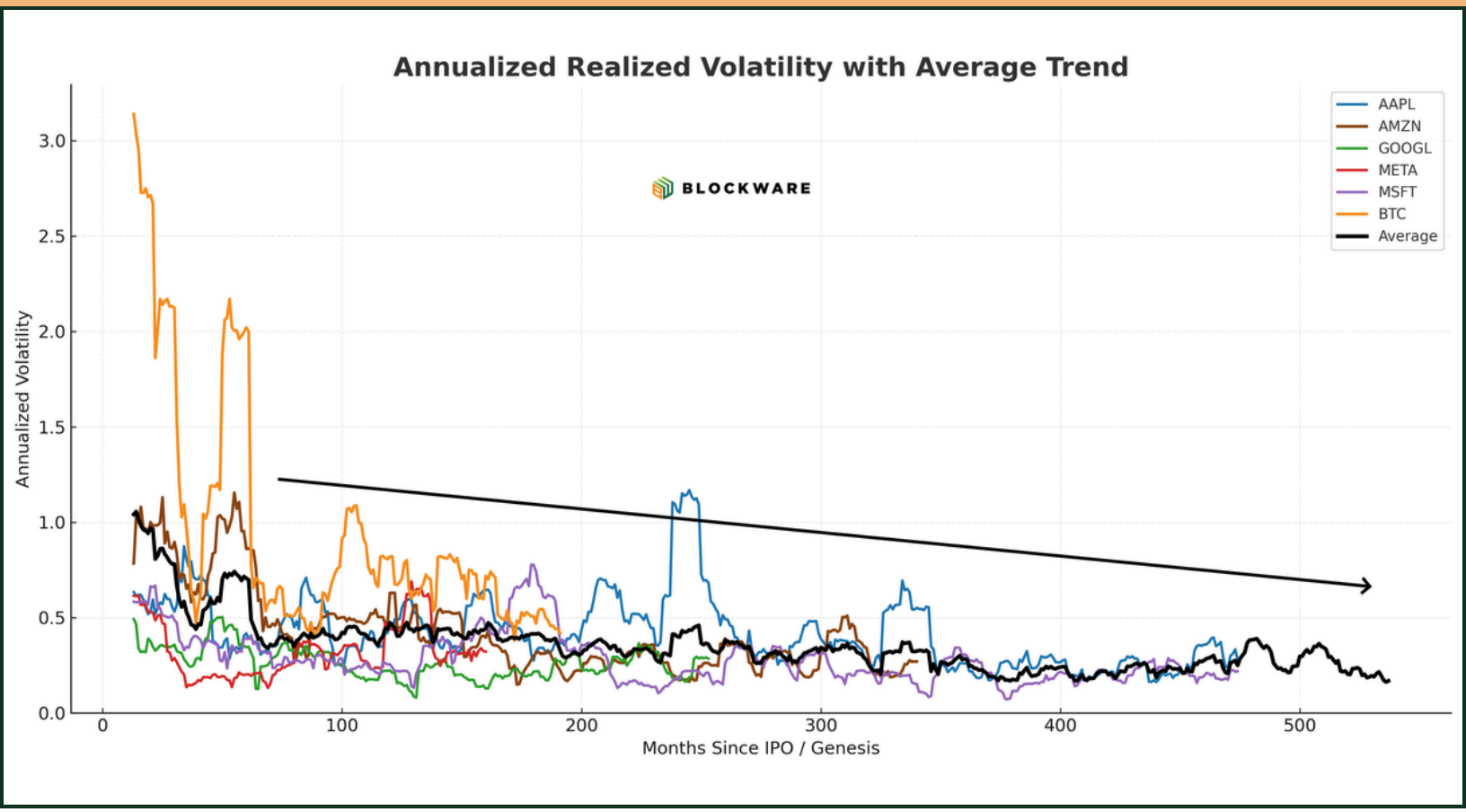


Prior to the ETF holders seldom distributed coins; only after BTC /USD increased an order of magnitude or more. **However, post-ETF, holders are far more responsive to changes in price; thrice become net-distributors following a ~50% increase in BTC/USD.** The institutional participants of the ETF era are quick to rebalance after a 25 to 50% return. Low returns by historical Bitcoin standards, but high by traditional finance standards, especially with the "risk free" US-10 year treasury rate currently at ~4.3%.



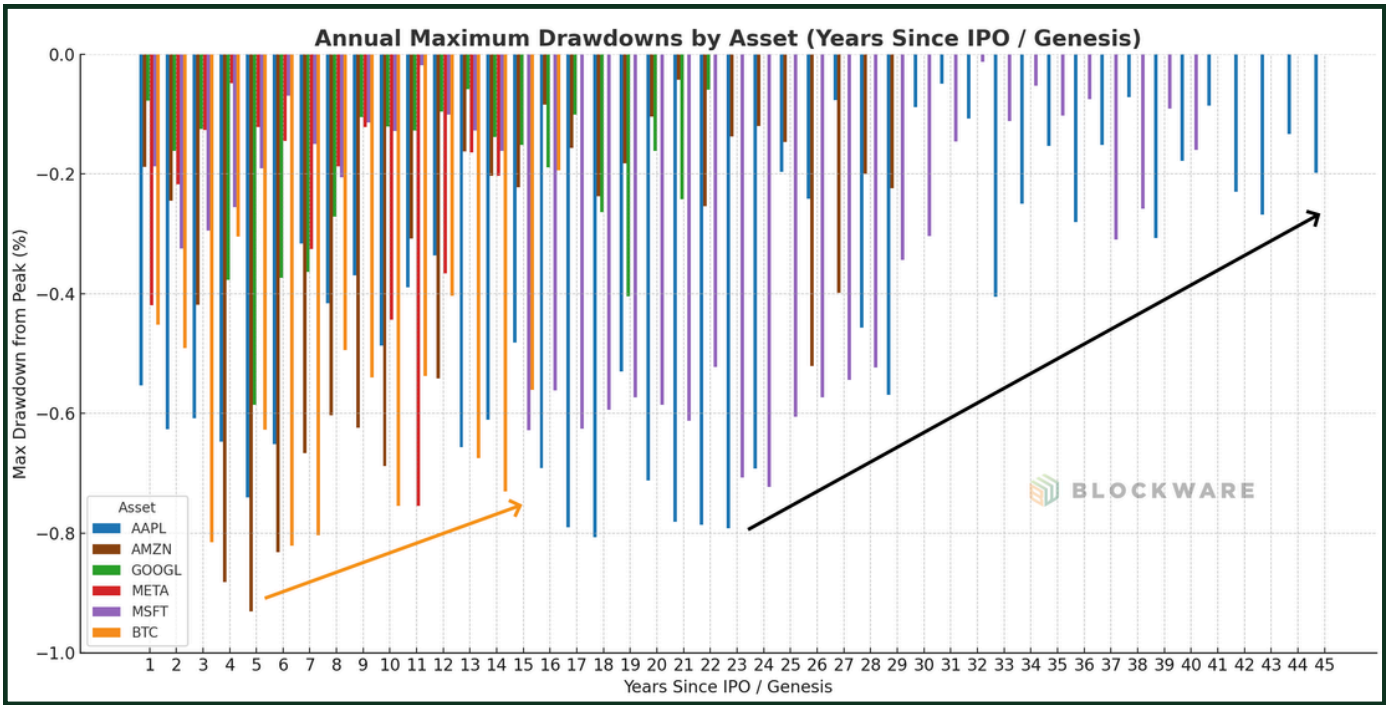
Section 4

Comparison to Other Digital Monopolies

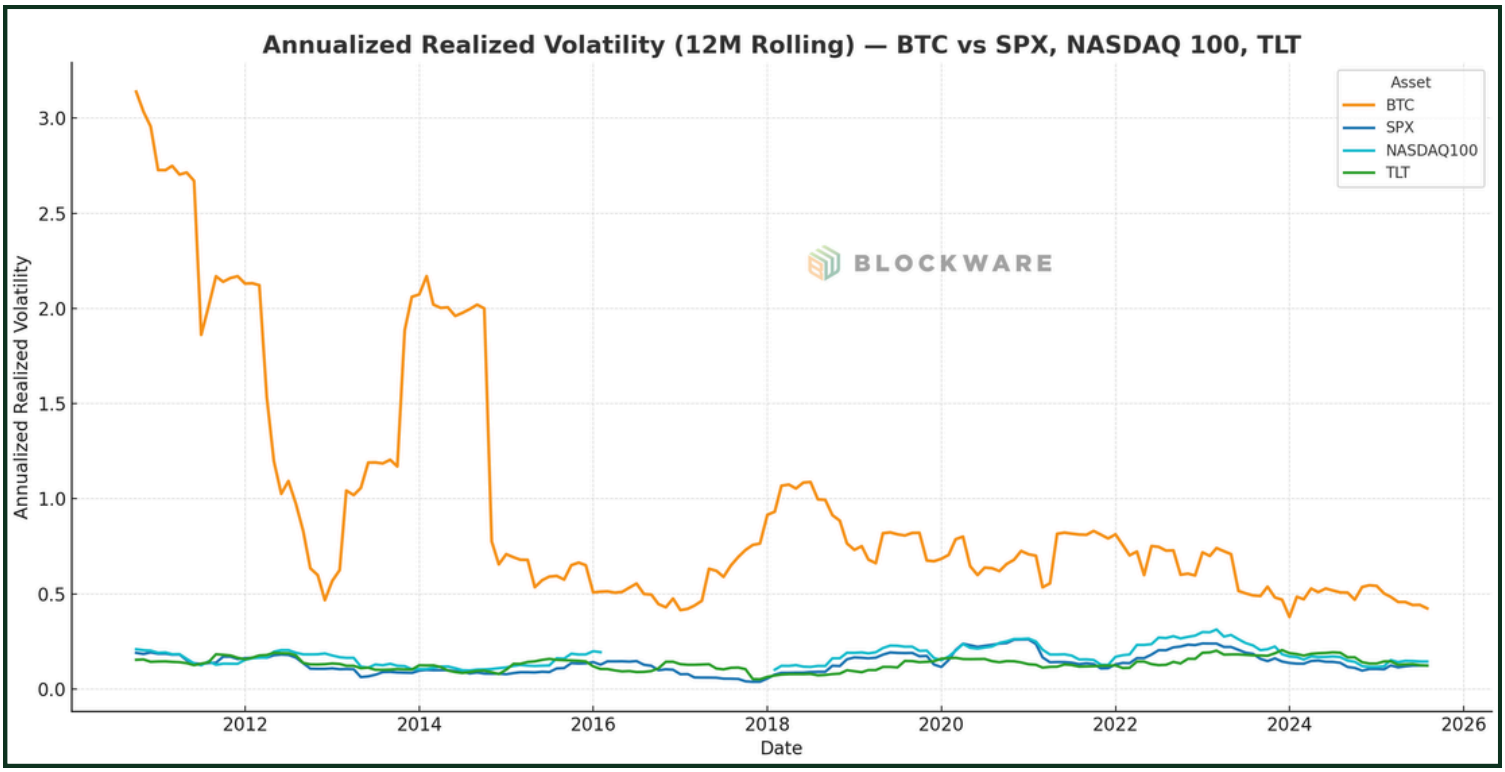


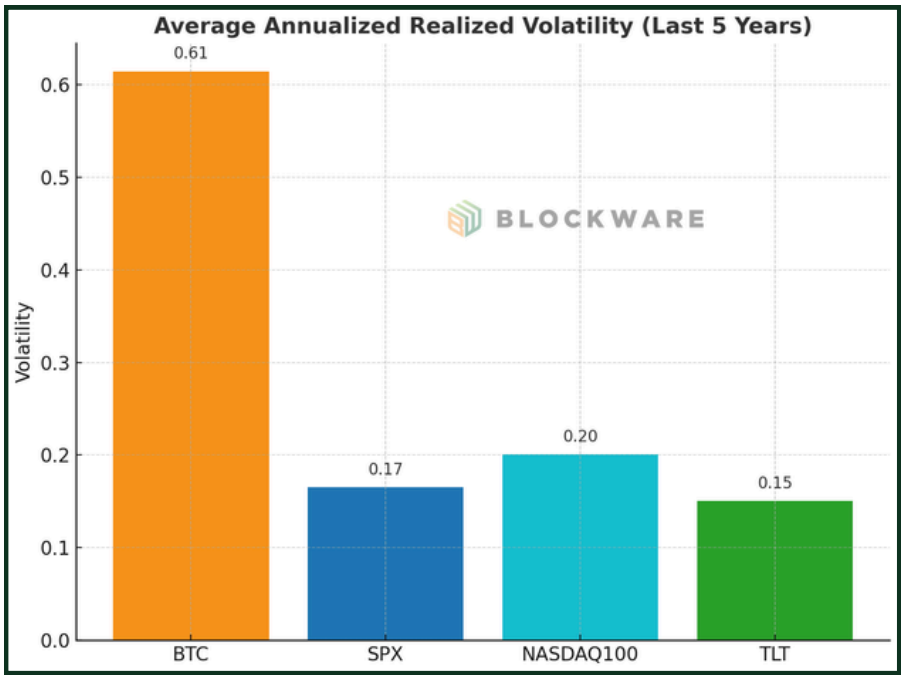
BTC/USD has followed a pattern similar to that of other world-changing, digital monopolies. **Extreme volatility early on as the market attempts to make sense of the technology and the scope of its potential impact. However, the magnitude of drawdowns and volatility diminishes over time.**

Since steadily eclipsing a $1 Trillion Market Cap in and being adopted by institutional investors via the ETFs, BTC's price has behaved in a similar manner to other tech monopolies. Although BTC is much different from these assets on a technical level (finite supply, no leadership team, etc.), markets have traded it in much the same way, giving us more reason to believe that BTC's volatility will continue to diminish over-time.



It is important to clarify what we mean when we argue that Bitcoin's historic four-year boom-and-bust cycles are fading. **Our thesis does not suggest that Bitcoin is suddenly "not volatile." Rather, the data shows that Bitcoin's volatility is declining relative to its own history, not relative to traditional assets.** Since the advent of U.S. spot ETFs in January 2024, realized volatility has compressed, drawdowns have moderated, and Bitcoin's price action has aligned more closely with capital inflows instead of speculative extremes. This represents a structural maturation of the market.

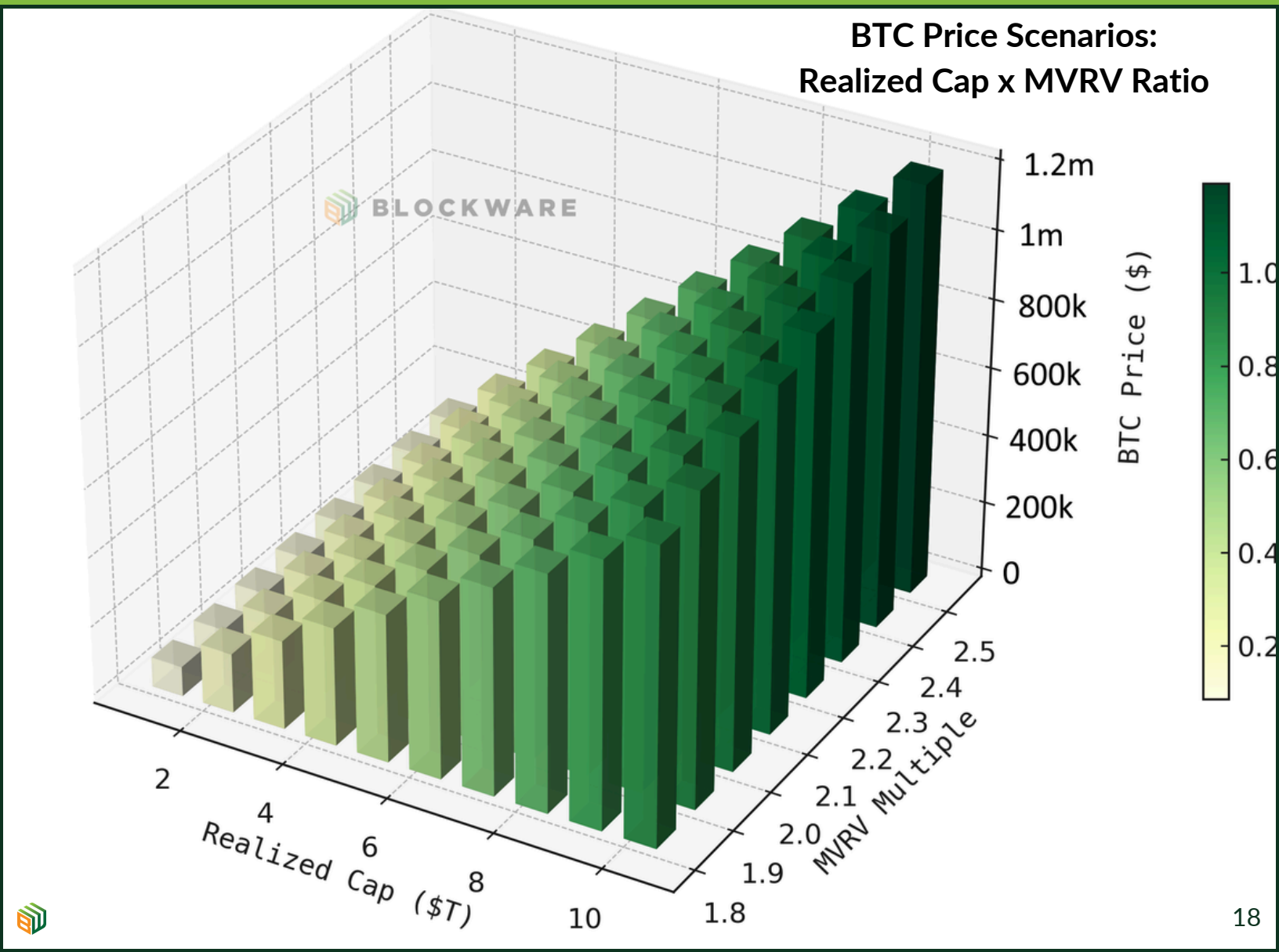




Despite declining volatility relative to its own history, when placed alongside traditional benchmarks such as the S&P 500, the NASDAQ 100, and long-duration U.S. Treasuries (TLT), Bitcoin remains objectively more volatile. Even as its annualized realized volatility has trended downward over the past decade—from levels exceeding 300% to under 50% today — it is still consistently several multiples higher than major equity or bond indices. In other words, volatility is falling within Bitcoin's own lifecycle as it matures. But in absolute terms, Bitcoin remains a high-volatility asset class compared to equities and bonds — and likely always will. **The distinction is crucial: our thesis is not that volatility disappears, but that the four-year hyper-cycles do.**

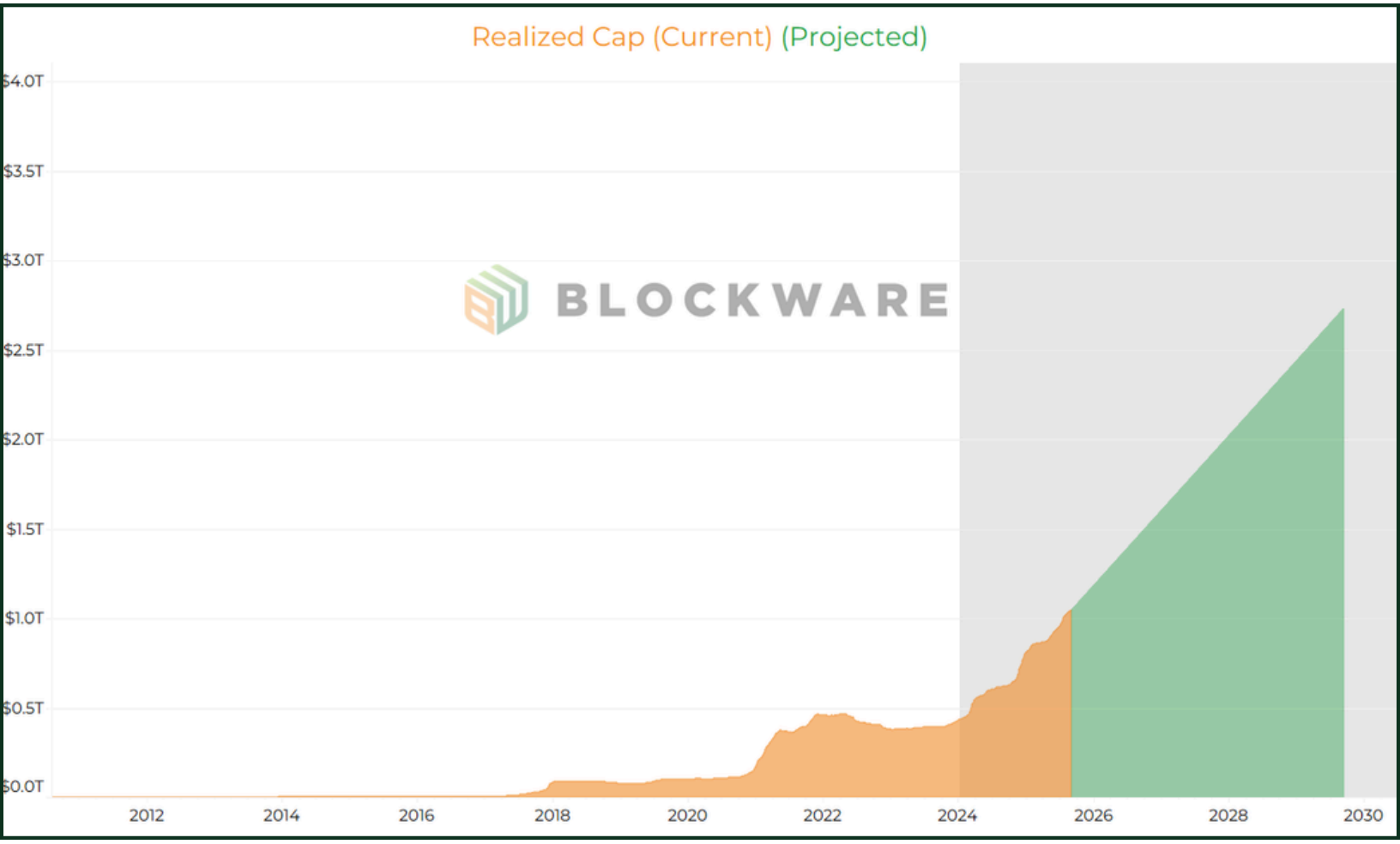
Section 5

Future Potential Price Based on Capital Inflows & MVRV Multiple



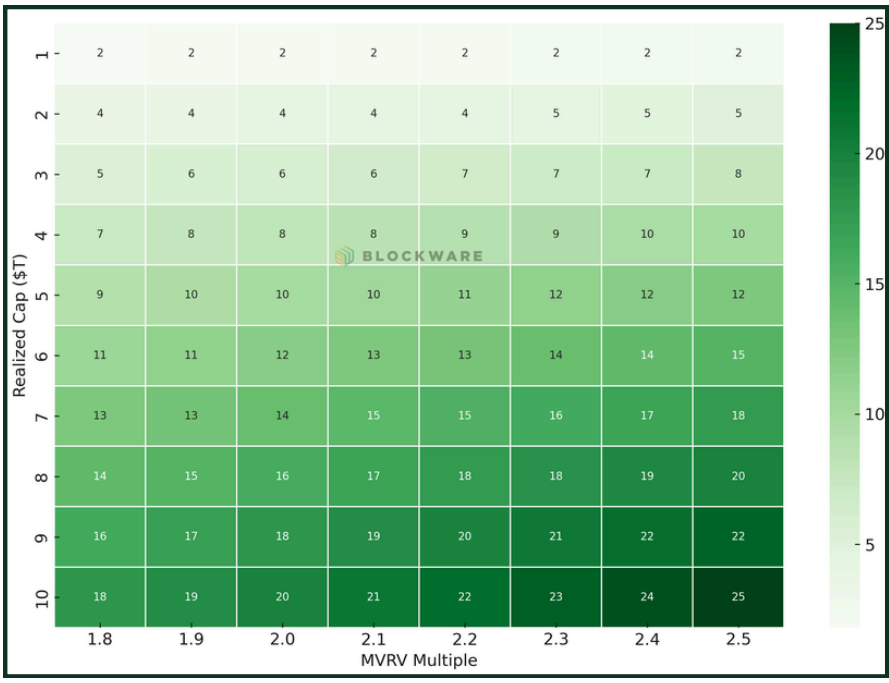
The most important driver of Bitcoin's future price is no longer the halving cycle, but **capital inflows**. Realized Cap provides the cleanest lens for quantifying those inflows, as every new dollar entering the network leaves a footprint on-chain. Market Cap, in turn, trades as a multiple of Realized Cap (the MVRV ratio). By modeling various levels of capital inflows and applying sustainable MVRV multiples, we can construct realistic price scenarios for Bitcoin over the coming years.

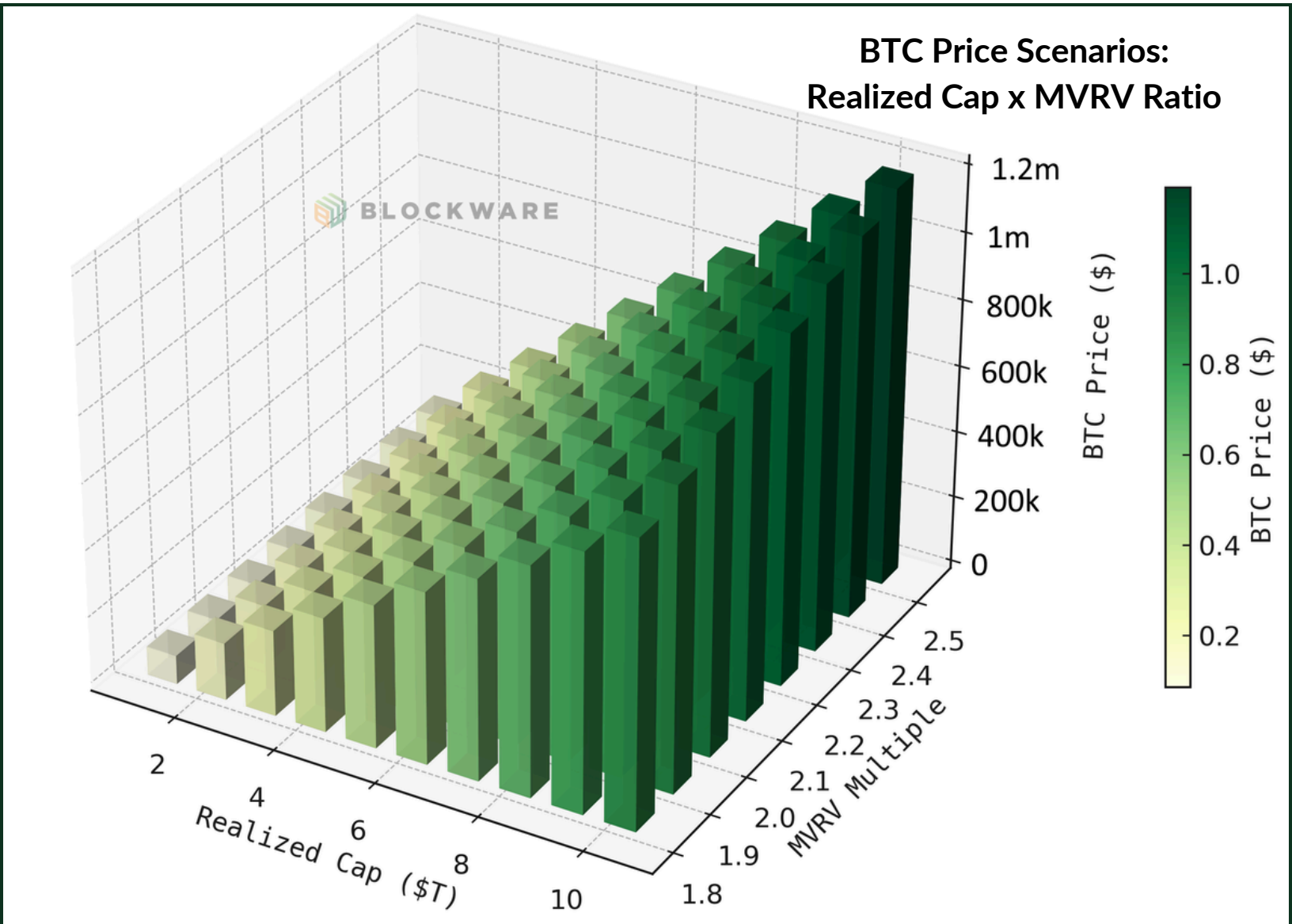
Presently, Bitcoin has a **realized cap of ~$1 trillion** and an **MVRV ratio of ~2.2**, which implies a market capitalization of ~$2.2 trillion and a BTC price of ~$112,000. Given the strong statistical relationship between realized cap and market cap — and the shrinking volatility of residuals — a reasonable future range can be projected from expected inflows. Over just the past 12 months, Bitcoin's realized cap has grown by **~$420 billion**. If inflows were to compound at that rate over the next four years, realized cap would reach ~$2.7 trillion.



The table to the right provides a visual framework by illustrating market cap based on an implied realized cap and a range of MVRV multiples. The table below extrapolates further by plotting the implied BTC price on the Z-Axis.

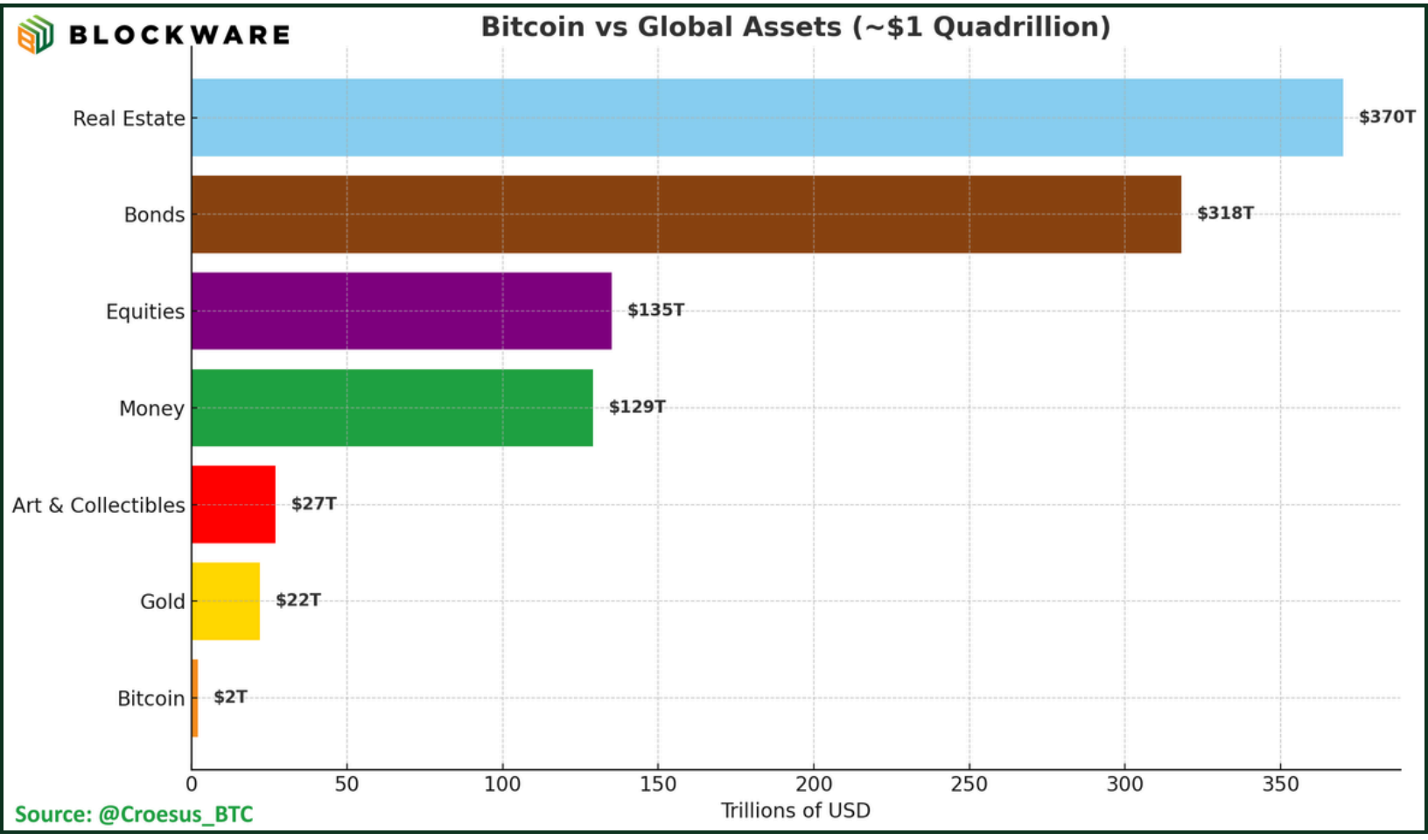
Applying a conservative MVRV range of 1.8 to 2.5 to a realized cap of ~$2.6 trillion yields a market cap of ~$4.6T–$6.5T and a **BTC price of ~$230,000–$320,000.**





When analyzing the total addressable market (TAM) for Stores of Value assets, BTC's asymmetric upside is undeniable. Bitcoin's ~$2T footprint today is negligible compared to $370T in global real estate, $318T in bonds, $135T in equities, and $129T in broad money supply. Even fractional allocations from these asset classes — channeled through ETFs, corporate treasuries, securitized products like MSTR's preferred stock, and fiat liquidity expansions — would translate into trillions of dollars in capital inflows.

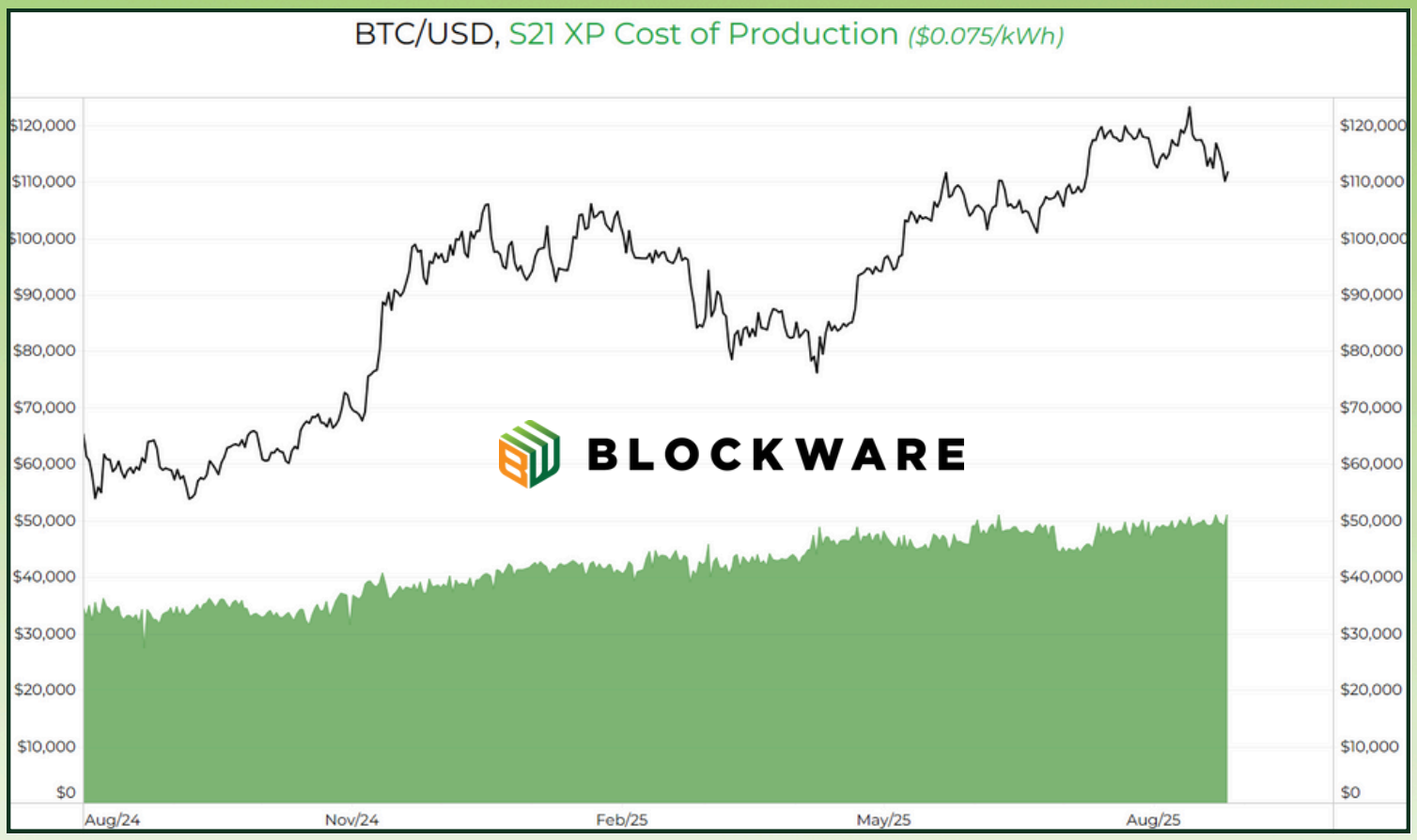
With halving cycles fading away, inflows from multi-trillion-dollar pools of capital will define Bitcoin's next era of price discovery.



Bitcoin Miners are uniquely positioned to benefit in this environment. Blockware clients mining with S21 XPs hosted at $0.075/kWh are able to **produce BTC at ~$50,000 per coin**. Bitcoin miners will continue to accumulate BTC at a discount while BTC/USD stair-steps higher in the coming years. Moreover, new guidelines from the Big Beautiful Bill allow miners to depreciate 100% of their hardware costs in a single-tax year.

- Acquire BTC Daily at a Discount
- 100% Tax Write Off in a Single Year

Blockware enables anybody to start mining Bitcoin. With our owned and operated data centers across the United States, we provide our clients access to low cost power and allow them to mine without having to deal with the heat and noise of mining at home. Start now at blockwaresolutions.com



All content is for informational purposes only. This Blockware Intelligence Report is of general nature and does not consider or address any individual circumstances and is not investment advice, nor should it be construed in any way as tax, accounting, legal, business, financial or regulatory advice. You should seek independent legal and financial advice, including advice as to tax consequences, before making any investment decision.