STABLEBITCOIN IS MONEY COLLATERALIZED BY BITCOIN JUST LIKE USD USED TO BE COLLATERALIZED BY GOLD

Abstract

Bitcoin has revolutionized digital finance as a decentralized store of value, but its extreme volatility hinders its adoption by businesses and individuals for short- to medium-term treasury management and payments. Stablecoins offer stability but lack growth potential and carry currency debasement due to excessive money printing. We propose StableBitcoin (SBTC), a token pegged to a smoothed rolling window power law regression of the price of Bitcoin itself, enabling users to capture Bitcoin's long-term upward trend without short-term "choppiness." SBTC uses a peer-to-peer minting and burning mechanism over-collateralized with a Bitcoin reserve for stability. This system solves the short-term volatility problem in Bitcoin treasuries and increases transaction speed by operating on the Solana network so it can be used as mode of payments across the world. Overall, this increases the potential market size of Bitcoin 10-fold by providing a stable alternative to fiat as a payment tool. Just like USD used to be collateralized by Gold, StableBitcoin is collateralized by Bitcoin making it perfect money.

Introduction

Bitcoin, as introduced by Satoshi Nakamoto in 2008, represents a peer-to-peer electronic cash system that eliminates trusted third parties through cryptographic proof-of-work and a distributed timestamp server. Its blockchain ensures transaction integrity and prevents double-spending, making it a revolutionary store of value with a market capitalization exceeding $1 trillion as of September 2025. However, Bitcoin's price volatility—characterized by 60-80% drawdowns in bear markets (e.g., 73% in 2018 and 65% in 2022)—poses significant risks for businesses and individuals using it as a treasury asset for short- and medium-term needs such as payments.

For businesses, Bitcoin's volatility disrupts operational stability. Corporate treasuries holding Bitcoin, such as Strategy's (formerly MicroStrategy) 582,000 BTC ($68 billion at $117,000/BTC in mid-2025) or Tesla's holdings, face quarterly earnings swings that can erode shareholder value. In 2022, many firms reported $10 billion+ in collective losses from Bitcoin's decline. Individuals saving for medium-term goals (e.g., 1-5 years) similarly risk capital erosion during downturns, limiting Bitcoin's utility beyond a long-term store of value.

The corporate Bitcoin treasury market has grown to 1.8 million BTC ($210 billion in 2025), with public companies holding 890,000 BTC ($104 billion) and private firms 416,000 BTC ($49 billion). This represents a fraction of global corporate cash reserves ($6-8 trillion), as volatility deters broader adoption. A pure Bitcoin treasury strategy offers high ROI (66.5% CAGR from 2017-2025) but exposes holders to unacceptable risks, such as forced liquidations during bear markets.

Stablecoins, pegged to fiat currencies like the USD, provide stability but are not ideal for short- or medium-term stores of value. Their market capitalization reached ~$230 billion in 2025, but they offer 0% intrinsic growth, eroding value through currency debasement (e.g., ~12% annual USD loss of purchasing power). For businesses, stablecoins lack the upside of Bitcoin's ~50-60% annualized returns, making them suboptimal for treasuries aiming for growth.

StableBitcoin (SBTC) addresses these issues by pegging to Bitcoin's smoothed rolling window power law regression, smoothing volatility while capturing long-term appreciation. This creates a stable store of value for treasuries, potentially expanding the market to $1 trillion+ by attracting risk-averse corporations and individuals who currently avoid Bitcoin or rely on underperforming stablecoins.

Figure 1. Bitcoin Price Candle Sticks versus SBTC in Orange over the last 12 years

The SBTC Mechanism

SBTC defines a stable unit of value as a token pegged to the following: A rolling weighted ridge power law regression on Bitcoin's price data, fitted over a sliding window of historical bars (default: 1000 days), to model long-term growth trends following a power law form $y = a \cdot x^b$, linearized via logarithms $\log(y) \approx c + b \cdot \log(x)$. The regression incorporates ridge regularization on the slope b to prevent overfitting and flatten extreme curves, time-based weighting to emphasize recent data, volatility-based weighting to downweight high-volatility periods, pre- and post-regression smoothing via simple moving averages (SMAs) to reduce noise, and a dampening mechanism to cap relative deviations in the output curve for stability.
Key computational steps:

- **Volatility Calculation:** Standard deviation of log returns $\Delta \log(\text{close})$ over a window (default vol_length = 20).
- **Input Smoothing:** SMA applied to closing prices (default input_smooth_length = 150).
- **Weighted Ridge Regression:** Custom function computes sums for weighted least squares with ridge penalty λ, default 50) on b; time weights via

$(\text{length}-k)^{\text{time}_\text{w}\text{eight}_\text{p}\text{ower}}$ (default 1.50, higher favors recency); volatility weights via $1/(|\text{vol}|+\epsilon)^{\text{vol}_\text{w}\text{eight}_\text{p}\text{ower}}$ (default 1.50, higher penalizes volatility); handles NA values and ensures positive x, y.

- **Output Smoothing:** SMA on the regression output (default output_smooth_length = 1000).
- **Dampening:** Limits relative log deviations in the final curve to a threshold multiple (k, default 0.1) of the stdev of log returns over a window (default stdev_length = 1000), clamping excessive changes via exponential adjustment.

Users acquire SBTC by depositing zBTC (native Bitcoin on Solana Network managed by Zeus Network) into the reserve, receiving SBTC equivalent to the deposited BTC's value at the current computed value. For example, depositing 1 BTC at $P_{BTC}=\$100{,}000$ and $P_{SBTC}=\$80{,}000$ yields 1.25 SBTC minus transaction fees.

Transactions in SBTC are verified on a blockchain (e.g., Solana using zBTC with a price oracle using Pyth Network to compute the target value), with minting and burning ensuring the peg:

- Minting: When demand pushes $P_{SBTC} > P_{SBTC_Target}$, new SBTC is minted and sold, adding zBTC to the reserve and lowering the price back to its target of $P_{SBTC} = P_{SBTC_Target}$.
- Burning: When $P_{SBTC} < P_{SBTC_Target}$, SBTC is bought back and burned using zBTC from the reserve.

Redemption allows users to exchange SBTC for zBTC at the current P_{SBTC_Target}, e.g., 1.25 SBTC redeems for \$1.25 \times $P_{SBTC_Target,end}/P_{BTC,end}$ BTC minus transaction fees.

The reserve remains over-collateralized with zBTC at 200-250% to withstand 70% BTC drops. Hedging via a combination of short futures (40-50% of reserve, 2x-3x leverage) or put options (10-15% premium) generates profits during dips, e.g., \$3.2 billion on a 20% drop to replenish BTC. We hope various Digital Asset Treasuries will emerge to tackle this task for the benefit of the protocol, and we will launch with at least 1 such DAT.

Note that in normal operations, many businesses will buy SBTC at a certain price and sell back some of it every month to cover expenses, but during that time frame, BTC prices on average will have grown faster than SBTC, resulting in excess profits for our treasury and for the various DATs involved in the ecosystem.

Security

Overcollateralization and hedging ensure security against depegs.

Transaction Oriented to replace Cash?

Since Bitcoin suffers high short term volatility, and transaction speed is slow, it is mainly used as a long term store of value instead of its original goal of being used as money. SBTC on the other hand is built on Solana as the execution layer, one of the fastest decentralized networks with very low transaction fees, makes it possible to bring BTC to be used as money for small transfers.

Bitcoin Treasury Playbook

Like many other Digital Asset Treasury companies, our DAO can get a public listing on the stock market, issue corporate debt & equity to grow excess treasury, protect the protocol while being for-profits.

Unlike Strategy, we can and will generate yield by acting as liquidity providers on various exchanges with our Bitcoin treasury, this way we can ensure to remain over-collateralized.

Conclusion

StableBitcoin builds on Bitcoin's foundation, providing a stable treasury asset that captures long-term growth without volatility or stablecoin loss of purchasing power. It unlocks a $1T+ market for risk-averse users, secured by BTC reserves and optimized to handle fast payments across the world.

References

[1] S. Nakamoto, "Bitcoin: A Peer-to-Peer Electronic Cash System," 2008.
[2] CoinDesk, "Corporate Bitcoin Holdings Nears $85B," 2025.
[3] BIS, "Stablecoins and Safe Asset Prices," 2025.
[4] Atlantic Council, "Stablecoins Trending: Frictions and Risks," 2025.
[5] Bitbo.io, "Bitcoin Treasuries," 2025.