PumpBTC: Unlocking Bitcoin's DeFi Potential [DRAFT]*

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Abstract

PumpBTC is an advanced liquid staking protocol designed to integrate Bitcoin (BTC) staking into decentralized finance (DeFi) while preserving liquidity. Built on Babylon, PumpBTC allows BTC holders to stake their assets, earn native yields, and participate in DeFi strategies without sacrificing security or accessibility.

Unlike traditional staking solutions, PumpBTC introduces a dual-token governance and incentive model that enhances decentralization and sustainability:

1. $PUMP (ERC-20) – The utility token, distributed as staking rewards and used for liquidity incentives.

2. $vePUMP (ERC-721 NFT) – The governance token, issued through vote-escrowin. $vePUMP to participate in protocol decisions, gauge voting, and yield distribution.

Additionally, PumpBTC expands BTC's DeFi utility through its upcoming BTC-fi Yield Vault, a CeDeFi platform that integrates institutional-grade security with DeFi-based yield strategies. Leveraging Veda's financial infrastructure, BTC-fi Yield Vault enhances yield efficiency, enabling secure and scalable BTC-denominated returns.

This whitepaper outlines PumpBTC's vision, technology, governance framework, and roadmap, demonstrating how it is revolutionizing Bitcoin staking and liquidity solutions within the DeFi ecosystem.

1 Introduction

1.1 The Problem

Bitcoin (BTC) is the world's most valuable and decentralized digital asset, yet its integration into decentralized finance (DeFi) remains significantly underdeveloped. Despite BTC's dominance in the crypto market, holders face several challenges when trying to leverage their assets for yield generation:

1 Lack of Native Staking for Bitcoin

Unlike Ethereum and other proof-of-stake (PoS) blockchains, Bitcoin lacks a native staking mechanism, preventing BTC holders from earning rewards on their holdings. While Ethereum's staked ETH (stETH) and other liquid staking tokens (LSTs) enable participation in DeFi, BTC holders have historically been unable to benefit from such yield opportunities.

2 Security Risks in Cross-Chain Bridges

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Many BTC staking solutions rely on centralized or insecure cross-chain bridges, which are highly vulnerable to hacks and exploits. The total value lost in bridge exploits exceeds $2 billion, highlighting the risk of using wrapped BTC (WBTC) or bridged assets on other chains.

3 Illiquidity in Traditional BTC Staking

While Bitcoin staking via Babylon is emerging as a new way for BTC holders to earn yield, it traditionally requires long lock-up periods, restricting liquidity and capital efficiency. Users who stake their BTC face limited flexibility in accessing funds or using them in DeFi.

4 Inefficient BTC Yield Strategies

Bitcoin holders interested in DeFi-based yield generation often rely on centralized exchanges (CeFi), which lack transparency, custody risks, and limited yield opportunities. At the same time, DeFi yield strategies for BTC are complex, requiring users to actively manage liquidity provision and lending strategies.

1.2 PumpBTC Solution

PumpBTC solves this issue by providing a secure liquid staking mechanism for Bitcoin holders, enabling them to participate in DeFi applications while earning sustainable yield. By leveraging the Babylon protocol, PumpBTC ensures that BTC holders can stake their assets without relying on centralized custodians.

1 Liquid Staking for Bitcoin (LSD) with 1:1 Pegging

PumpBTC introduces a liquid staking derivative (LSD) model where users stake BTC and receive pumpBTC, a yield-bearing token pegged 1:1 to BTC. This ensures that BTC stakers:

- Earn native yield from Babylon staking.
- Retain full liquidity by using pumpBTC across DeFi protocols.
- Avoid exposure to centralized or insecure bridge risks.

2 Secure and Decentralized Staking Mechanism

Unlike wrapped BTC (WBTC) or bridged assets, PumpBTC utilizes Babylon's Bitcoin staking protocol, which removes the need for centralized custodians or insecure bridges. BTC remains securely staked while generating rewards, reducing security vulnerabilities associated with traditional cross-chain solutions.

3 Governance and Incentive Model with $PUMP & $vePUMP

PumpBTC ensures sustainable growth through a dual-token model that aligns incentives and decentralizes governance:

- $PUMP (Utility Token): Distributed to liquidity providers, used for staking incentives.
- $vePUMP (Governance NFT): Earned by vote-escrowing $PUMP, allowing holders to vote on

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protocol decisions, rewards distribution, and incentive allocation. By incorporating vote-escrowed governance (veTokenomics), PumpBTC incentivizes long-term commitment while empowering the community to control key protocol decisions.

4 BTC-fi Yield Vault: CeDeFi-Level Security with Scalable DeFi Returns

To further enhance Bitcoin's yield generation, PumpBTC introduces the BTC-fi Yield Vault, which combines:

- CeFi-Level Security → Institutional-grade security infrastructure via Cobo & Ceffu.
- DeFi Yield Optimization → Automated strategies that maximize BTC-denominated returns.
- Cross-Chain Compatibility → Enabling BTC holders to earn competitive DeFi yields while retaining security and scalability.

5 Multi-Chain Expansion for BTC Utility

PumpBTC is natively integrated with Babylon, but its utility extends beyond a single blockchain. The protocol is expanding to:

- Binance Smart Chain (BSC) – Lower transaction costs & wider DeFi adoption.
- Berachain & Movement – Advanced DeFi ecosystems with enhanced liquidity strategies. This cross-chain expansion allows BTC holders to maximize their assets while maintaining full interoperability across multiple blockchain networks.

2 Market Analysis

The liquid staking market for Bitcoin has significant potential, as demonstrated by comparisons with Ethereum's staking ecosystem.

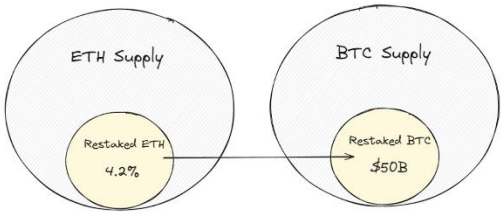
Assuming a similar adoption rate to Ethereum's liquid staking tokens (LSTs), which currently represent about 4.2% of the total ETH supply, the potential market for Bitcoin liquid staking could reach approximately $50 billion in Total Value Locked (TVL).

This is based on Ethereum's current staking landscape, where about 32 million ETH are staked, representing 27.18% of the total ETH supply, with 5 million ETH engaged in restaking protocols. If Bitcoin were to achieve a similar 4.2% participation rate in liquid staking relative to its total supply, it would match the scale of the recently approved U.S. Bitcoin Spot ETFs.

This comparison suggests that the Bitcoin liquid staking market has the potential to become a major force in the cryptocurrency ecosystem, offering new opportunities for Bitcoin holders to participate in DeFi activities while

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maintaining exposure to BTC.



**The data used is from May 2024*

3 Architecture

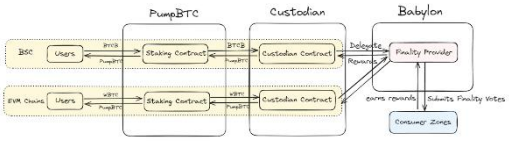
3.1 How does PumpBTC Work?

Prioritizing security, PumpBTC doesn't directly hold user assets but instead collaborates with professional, licensed custodians like Cobo MPC and Coincover. This approach significantly reduces risks associated with traditional bridges (such as Multichain, Nomad, etc) while still enabling additional yields.

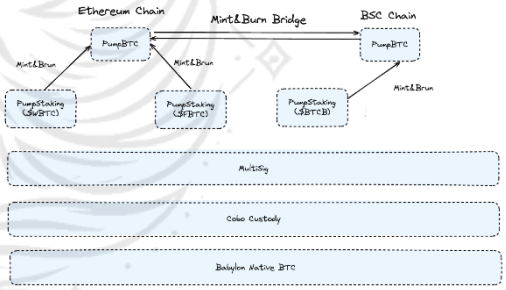
Transparency is at the forefront of PumpBTC's design, with a real-time dashboard displaying Proof of Asset data, allowing users to constantly monitor their staked BTC.

The custodians handle the delegation of equivalent native BTC to Babylon's Finality Provider on the Bitcoin mainnet and manage the distribution of rewards to users. This comprehensive system ensures that PumpBTC never directly handles user assets, minimizing security risks while maximizing potential returns.

By combining multi-chain accessibility, professional-grade asset security, real-time transparency, and efficient yield generation, PumpBTC offers a unique solution in the DeFi landscape. It provides a safe and profitable way for Bitcoin holders to participate in Babylon Staking across various blockchain ecosystems, all while maintaining the security, liquidity, and integrity of their original assets.



By choosing $pumpBTC, you're not just staking your Bitcoin – you're unleashing its full potential in the dynamic world of decentralized finance. Experience the perfect blend of Bitcoin's value proposition with the agility and opportunities of the broader DeFi ecosystem.



As can be seen from this more visual illustration, assets are either in EVM contracts (as wrapped BTC) Or in Babylon (as native BTC).

The intermediary MultiSig -> Binance -> Cobo custody are all channels and theoretically should not hold assets.

$pumpBTC contracts are independently deployed on different chains. Each chain can mint $pumpBTC through staking contracts and burn $pumpBTC through unstaking.

The total supply of $pumpBTC equals the sum of supplies from all $pumpBTC contracts across chains. Each $pumpBTC

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is backed by a 1:1 full reserve of native BTC. PumpStaking contracts serve as deposit and withdrawal channels for Wrapped BTC Tokens ($BTCB / $WBTC / $FBTC) on different chains.

The majority of assets are stored as native BTC on Babylon via Cobo Custody. A smaller portion is in PumpStaking as Wrapped BTC Tokens.

PumpTokens can be transferred between different chains via cross-chain bridges.

The cross-chain process works as follows:

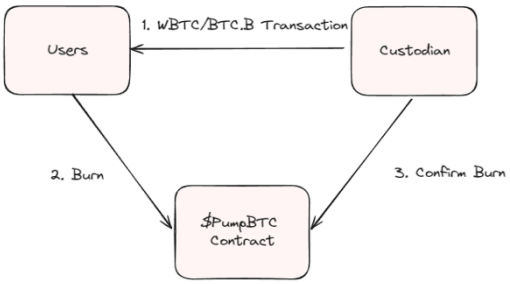
- The source chain burns $pumpBTC
- The destination chain mints $pumpBTC

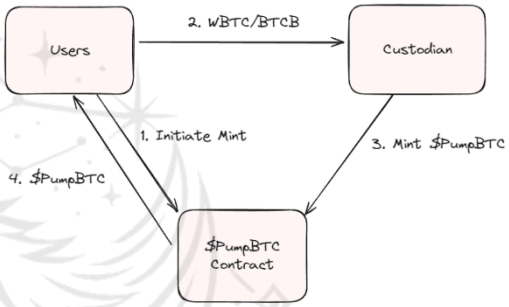
This cross-chain method doesn't affect the total supply, thus maintaining the 1:1 full reserve of native BTC backing each $pumpBTC.

3.2 Mint & Burn Process

3.2.1 Mint Process

The minting process in PumpBTC represents the creation of new wrapped tokens, specifically $pumpBTC. This process is initiated when a user deposits assets into the PumpBTC system. When a user commits their assets, they are transferred directly to the partnered Custodian, not to PumpBTC itself. Upon receiving these assets, the Custodian triggers a mint transaction to the PumpBTC smart contract. This action results in the creation of new $pumpBTC tokens at a 1:1 ratio to the deposited assets. Finally, these newly minted $pumpBTC tokens are transferred back to the user.





3.2.2 Burn Process

Burning in the context of PumpBTC refers to the process of redeeming Bitcoin in exchange for $pumpBTC tokens. This operation is essentially the reverse of the minting process and plays a crucial role in maintaining the system's equilibrium and token integrity.

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4 Conclusion

PumpBTC is redefining Bitcoin staking and DeFi integration by providing a secure, liquid, and yield-optimized staking solution built on Babylon's BTC staking protocol. By leveraging a dual-token model ($PUMP & $vePUMP), PumpBTC ensures long-term sustainability, decentralized governance, and high-yield opportunities for BTC holders.

With PumpBTC, Bitcoin holders can maximize their yield while participating in DeFi ecosystems across multiple chains, ensuring higher returns and deeper liquidity for BTC in decentralized finance.

As Bitcoin staking adoption grows, PumpBTC is well-positioned to become the leading liquid staking solution for BTC, capturing a significant share of the emerging BTC LSD market. With upcoming expansions into Berachain, Movement, and additional Layer-2 solutions, PumpBTC aims to offer institutional-grade BTC staking with DeFi scalability.

By integrating secure staking, deep liquidity, and governance-driven incentives, PumpBTC is unlocking Bitcoin's full DeFi potential, creating a sustainable and decentralized staking economy for the future.

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