HEX: A BTC-Backed Stablecoin

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Abstract

This white paper introduces HEX, a stablecoin anchored to Bitcoin (BTC) designed to provide price stability and leverage the robustness of the BTC ecosystem. HEX aims to combine the advantages of decentralized finance with the reliability of Bitcoin to create a stable and secure digital currency. With an optimistic outlook on the BTC ecosystem, HEX seeks to lower the barriers for users to transact within the BTC ecosystem, attracting more users and liquidity into this market. By simplifying access and ensuring stability, HEX aspires to foster greater participation and facilitate smoother transactions in the Bitcoin economy.

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1 Introduction

1.1 Background

The cryptocurrency market has seen tremendous growth since the inception of Bitcoin (BTC) in 2009. Today, Bitcoin boasts a market capitalization of approximately $1.4 trillion, making it the eighth-largest asset by market value globally.

However, despite its substantial market cap, the BTC ecosystem's market capitalization is less than $10 billion. This contrasts sharply with Ethereum (ETH), which has a market capitalization of around $400 billion, and its ecosystem, valued at nearly $300 billion. This disparity indicates a significant growth potential within the BTC ecosystem, positioning it as a prospective trillion-dollar market.

Most existing stablecoins are pegged to fiat currencies, primarily the US Dollar. While USD-backed stablecoins have provided stability in the volatile cryptocurrency market, they fundamentally contradict the original vision of Bitcoin's creator, Satoshi Nakamoto. Bitcoin was designed as a decentralized currency to counteract the inflationary pressures of fiat currencies like the US Dollar. HEX, as a BTC-pegged stablecoin, aligns with Nakamoto's vision by maintaining a fixed exchange rate with BTC, thus offering a stable digital currency that leverages the robustness and reliability of Bitcoin without relying on fiat currencies.

HEX aims to lower the barriers for users to transact within the BTC ecosystem, attracting more users and liquidity into the market. By providing price stability and enhancing accessibility, HEX seeks to facilitate greater participation and drive the growth of the BTC ecosystem, unlocking its potential as the next multi-billion dollar market.

1.2 Purpose of HEX

HEX is designed with several key objectives in mind, each aligning with the foundational principles of Bitcoin and aiming to foster the growth and accessibility of the BTC ecosystem.

1. **The First BTC-Pegged Stablecoin**: HEX stands as the first stablecoin pegged to Bitcoin, embodying the original vision of Bitcoin's creator, Satoshi Nakamoto. Nakamoto's intention was to create a decentralized currency independent of traditional financial systems and the inflationary pressures of fiat currencies. By anchoring HEX to BTC, we honor this vision and provide a stable, decentralized alternative that remains true to the spirit of Bitcoin.

2. **Enhanced Accessibility and Utility**: While Bitcoin itself is a robust store of value, its high price point can make it challenging to use for everyday transactions and as a benchmark for value. HEX, pegged to BTC but with a lower price point (1 BTC = 65536 HEX), offers a more accessible option for users. This lower denomination makes HEX more suitable as a unit of account and a medium of exchange, promoting its use within the BTC ecosystem. As BTC Maximalists, we believe in a BTC-denominated value system, and HEX aligns with this belief by providing stability in BTC terms.

3. **Increasing Users and Liquidity in the BTC Ecosystem**: By providing a stable and easily accessible digital currency, HEX aims to attract more users and liquidity to the BTC ecosystem. This influx of new participants and capital can drive further development and innovation within the BTC space, enhancing its overall vibrancy and economic potential. HEX seeks to be a catalyst for growth, helping to unlock the BTC ecosystem's latent potential and elevate it to a multi-hundred-billion dollar market.

4. **Utilizing Native BTC Staking Solutions**: HEX will leverage native BTC staking solutions to ensure that users' BTC is securely locked on the BTC Layer 1. By partnering with platforms like Babylon and FBTC, HEX will enable users to earn native staking rewards on their BTC holdings. This approach not only enhances the security of users' BTC but also provides additional incentives for holding and using HEX within the BTC ecosystem.

In summary, HEX is not just a stablecoin; it is a strategic initiative designed to align with the original goals of Bitcoin, enhance its usability, and stimulate the growth and maturation of the BTC ecosystem.

2 Overview of Stablecoins

2.1 Definition and Types

There are currently three types of stablecoins available on the market:

Fiat-Collateralized Stablecoins:

Fiat-collateralized stablecoins are backed by fiat currencies (such as USD, EUR, etc.) as collateral. Examples include Tether (USDT), USD Coin (USDC), and TrueUSD (TUSD). These stablecoins are typically issued and managed by centralized institutions, maintaining a 1:1 collateral ratio, meaning that for every stablecoin issued, one unit of fiat currency is held as collateral. This provides stability but relies heavily on trust in the issuing entity and regulatory compliance.

Crypto-Collateralized Stablecoins:

Crypto-collateralized stablecoins are backed by cryptocurrencies (such as Bitcoin, Ethereum, etc.) as collateral. Examples include Dai, BitUSD, and sUSD. The collateral ratio for these stablecoins is usually higher, typically 1:1.5 or 1:2, meaning that to issue one stablecoin, 1.5 or 2 units of cryptocurrency are required as collateral. This over-collateralization helps to absorb the volatility of the underlying cryptocurrency but can be capital inefficient.

Algorithmic Stablecoins:

Algorithmic stablecoins use algorithms to maintain price stability. Examples include Basis Cash and Frax. These stablecoins employ complex mechanisms, often involving elastic supply and incentive systems, to adjust supply and demand and ensure price stability. Instead of being backed by assets, they rely on smart contracts and governance protocols to manage the stablecoin supply, aiming to maintain a stable value through algorithmic adjustments.

2.2 Importance in the Cryptocurrency Ecosystem

Stablecoins play a crucial role in the Web3 and broader cryptocurrency ecosystem by providing a bridge between the volatile world of cryptocurrencies and the stability required for everyday transactions and financial operations. Their importance can be summarized in several key areas:

2.2.1 Price Stability

One of the primary functions of stablecoins is to provide price stability within the otherwise volatile cryptocurrency market. This stability allows users to conduct transactions, store value, and perform financial planning without the risk associated with price fluctuations typical of cryptocurrencies like Bitcoin and Ethereum.

2.2.2 Medium of Exchange

Stablecoins serve as an efficient medium of exchange in the Web3 ecosystem. They facilitate smoother and faster transactions across various decentralized applications (dApps), decentralized finance (DeFi) platforms, and peer-to-peer exchanges. By maintaining a stable value, they are preferred for everyday purchases, remittances, and payments.

2.2.3 Unit of Account

In the Web3 ecosystem, stablecoins provide a reliable unit of account, enabling users to price goods and services consistently. This is crucial for the development of decentralized marketplaces and financial instruments, where consistent valuation is necessary for contracts, lending, and borrowing.

2.2.4 Store of Value

Stablecoins offer a stable store of value for users looking to preserve their wealth without exposure to the volatility of the broader cryptocurrency market. This makes them an attractive option for investors and users who want to hold digital assets with minimal risk.

2.2.5 DeFi Ecosystem Integration

Stablecoins are integral to the decentralized finance (DeFi) ecosystem. They are widely used in lending and borrowing platforms, liquidity pools, yield farming, and as collateral for various financial products. Their stability allows DeFi protocols to function efficiently and attract a broader user base.

2.2.6 Cross-Border Transactions

Stablecoins facilitate efficient cross-border transactions by reducing the time and cost associated with traditional banking systems. Their use in remittances and international trade is growing, providing a faster and more economical alternative to traditional fiat transfers.

2.2.7 On-Ramp and Off-Ramp for Crypto Markets

Stablecoins act as an on-ramp and off-ramp for users entering or exiting the cryptocurrency markets. They provide a stable gateway for converting fiat

currencies to digital assets and vice versa, simplifying the process for new and experienced users alike.

In summary, stablecoins are a foundational element of the Web3 ecosystem, enabling price stability, efficient transactions, and broader adoption of decentralized technologies. Their integration into various facets of the cryptocurrency market underscores their critical role in the ongoing development and maturation of the digital economy.

2.3 Challenges Faced by Existing Stablecoins

Stablecoins usually vary in aspects such as the assets they're backed by, their collateral ratios, their issuance procedures, and their price stabilization strategies. Although different stablecoins may be appropriate for different use cases, they all exhibit one shared limitation: the absence of earning interest or real yield.

Most stablecoins do not generate interest, forcing their holders to bear the continuous depreciation of USD caused by inflation. This limitation primarily stems from their issuance mechanisms and underlying assets.

2.3.1 Fiat-Collateralized Stablecoins

Fiat-collateralized stablecoins, such as Tether (USDT) and USD Coin (USDC), are typically issued by centralized organizations. These stablecoins maintain a stable value and a high collateral ratio but have total issuance limits. Consequently, they offer lower yields and face challenges in providing high returns comparable to traditional bank deposits. Moreover, the high centralization poses significant trust risks. The collapse of FTX highlighted the potential dangers of relying heavily on centralized entities; any failure can deliver a severe blow to the entire cryptocurrency market.

2.3.2 Cryptocurrency-Collateralized Stablecoins

Cryptocurrency-collateralized stablecoins are issued when holders pledge a certain amount of cryptocurrency as collateral. Examples include Dai and sUSD. Since the collateralized cryptocurrencies cannot generate interest income, stablecoin issuers cannot provide a secure and stable income to their holders. This limits the appeal of these stablecoins in a market where users seek yield generation opportunities.

2.3.3 Algorithmic Stablecoins

Algorithmic stablecoins use complex mechanisms to maintain price stability but often lack the ability to provide interest or yield. Their stability depends on maintaining a delicate balance of supply and demand, which can be disrupted, leading to potential de-pegging and loss of value.

2.3.4 Centralization Risks and Market Impact

Stablecoins like USDT and USDC, which dominate the market, are highly centralized. This centralization introduces significant trust risks and concentration of power. The FTX collapse serves as a stark reminder of how centralized failures can have catastrophic impacts on the crypto market. Additionally, entities like Tether extract substantial profits from the crypto market each year, leading to a long-term outflow of funds from the ecosystem, which is not a sustainable or healthy phenomenon.

2.3.5 HEX's Vision

HEX aims to address these challenges by being a BTC-pegged stablecoin that provides stability in BTC terms while leveraging native BTC staking solutions to generate yield. By partnering with platforms like Babylon and FBTC, HEX can offer secure and native interest income on BTC holdings, differentiating itself from traditional stablecoins. HEX's decentralized model reduces trust risks associated with centralized entities, thereby enhancing the overall resilience and sustainability of the cryptocurrency ecosystem.

In conclusion, the current absence of interest in stablecoins and their centralization risks pose significant challenges. HEX's vision is to provide a stable, BTC-pegged alternative that not only preserves value in BTC terms but also generates yield, fostering a healthier and more robust crypto ecosystem.

3 The Bitcoin Ecosystem

3.1 Historical Context

Bitcoin (BTC) was introduced in 2009 by an anonymous entity known as Satoshi Nakamoto. As the first decentralized cryptocurrency, Bitcoin aimed to provide a peer-to-peer electronic cash system that operates independently of central authorities. Over the years, Bitcoin has evolved from a niche digital currency to a globally recognized store of value and medium of exchange.

3.1.1 Early Development

In its early years, Bitcoin was primarily used by enthusiasts and technologists who believed in the potential of decentralized finance. The first notable transaction occurred in 2010 when a programmer paid 10,000 BTC for two pizzas, highlighting both the novelty and volatility of Bitcoin.

3.1.2 Scaling Challenges and Solutions

As Bitcoin's popularity grew, so did its transaction volume, leading to scalability issues. To address these challenges, several key developments have been implemented:

Lightning Network The Lightning Network is a second-layer solution designed to facilitate faster and cheaper transactions on the Bitcoin network. Introduced in 2015, it allows users to create off-chain payment channels, enabling near-instantaneous transactions with minimal fees. This innovation has significantly enhanced Bitcoin's capability as a medium of exchange, making microtransactions feasible and promoting broader adoption.

RGB Protocol RGB is a smart contract protocol for Bitcoin, designed to enable complex programmable assets and digital identities. Launched in 2019, RGB leverages the Bitcoin network's security while allowing for more sophisticated functionalities, similar to those found in Ethereum's smart contracts. This protocol enhances Bitcoin's versatility and opens up new possibilities for decentralized applications within the BTC ecosystem.

Inscriptions and Runes Inscriptions, also known as "Bitcoin Inscriptions," and Runes are part of an emerging ecosystem focusing on digital collectibles and non-fungible tokens (NFTs) on Bitcoin. Inscriptions use the Bitcoin blockchain to store and transfer unique digital assets, while Runes provide a framework for creating and managing these assets. This ecosystem is still in its nascent stages but holds significant potential for expanding Bitcoin's use cases beyond traditional currency functions.

3.1.3 Ecosystem Growth and Adoption

Bitcoin's ecosystem has grown exponentially over the past decade, driven by increasing institutional interest, technological advancements, and broader societal acceptance. Major companies and financial institutions have begun to recognize Bitcoin as a legitimate asset class, leading to the development of various financial products like Bitcoin ETFs and futures.

Regulatory Developments Regulatory frameworks for Bitcoin and other cryptocurrencies have evolved significantly. While some countries have embraced Bitcoin, implementing supportive regulations, others have been more cautious or restrictive. These regulatory developments continue to shape the trajectory of Bitcoin's adoption and integration into the global financial system.

In summary, the Bitcoin ecosystem has undergone significant evolution since its inception. With innovations like the Lightning Network, RGB protocol, and the emergence of digital collectibles, Bitcoin continues to expand its utility and resilience. HEX, as a BTC-pegged stablecoin, aims to further enhance this ecosystem by providing stability, accessibility, and yield, leveraging the robust foundation laid by Bitcoin and its community.

3.2 Current State and Market Dynamics

As of today, Bitcoin (BTC) holds a market capitalization of approximately $1.4 trillion, making it the eighth-largest asset by market value globally. Despite this significant valuation, the BTC ecosystem's market capitalization is relatively small, estimated at less than $10 billion. This contrasts sharply with the Ethereum (ETH) ecosystem, where Ethereum's market capitalization is around $400 billion and its ecosystem's market value is nearly $300 billion. This disparity highlights the substantial untapped potential within the BTC ecosystem.

3.2.1 Current Market Dynamics

The BTC ecosystem is still in its early stages of development. Although Bitcoin is widely recognized and used as a store of value and medium of exchange, the broader ecosystem, including decentralized applications (dApps), financial services, and other blockchain innovations, remains underdeveloped compared to Ethereum. Key factors contributing to this include:

Technological Maturity While Bitcoin's base layer provides unparalleled security and decentralization, it lacks the advanced programmability features found in other blockchains like Ethereum. Efforts to enhance Bitcoin's capabilities, such as the Lightning Network and the RGB protocol, are ongoing but have not yet reached widespread adoption.

Regulatory Environment The regulatory landscape for Bitcoin and its ecosystem is still evolving. While some jurisdictions have created favorable regulatory frameworks, others remain uncertain or hostile towards cryptocurrency innovations. This uncertainty can inhibit the growth and adoption of BTC-based projects.

Infrastructure Development The infrastructure supporting the BTC ecosystem, including wallet services, exchanges, and payment processors, is still maturing. While there are significant advancements, the ecosystem lacks the comprehensive support and ease of use that would enable mass adoption.

User and Developer Engagement The BTC ecosystem has not yet attracted the same level of developer activity and user engagement as seen in the Ethereum ecosystem. The number of dApps, DeFi projects, and other innovations on Bitcoin is still relatively low, reflecting its early-stage development.

3.2.2 Potential for Growth

Despite these challenges, the BTC ecosystem holds immense potential for growth. The robust security and decentralization of the Bitcoin network provide a strong foundation for future development. As technological solutions like the Lightning

Network and RGB protocol mature, they are expected to drive significant advancements in the usability and functionality of Bitcoin-based applications.

HEX's Role in the BTC Ecosystem HEX aims to catalyze this growth by increasing liquidity and user engagement within the BTC ecosystem. By providing a stablecoin pegged to Bitcoin, HEX offers a reliable and accessible medium of exchange and store of value. This stability encourages broader participation in the BTC ecosystem, attracting both users and developers.

HEX also aims to leverage native BTC staking solutions, such as those provided by platforms like Babylon and FBTC, to offer yield opportunities. This not only enhances the appeal of HEX as a stablecoin but also promotes the growth of the BTC ecosystem by providing additional financial incentives.

In conclusion, the BTC ecosystem is at a nascent stage with significant room for growth. HEX's objective is to drive this growth by enhancing liquidity, user engagement, and overall ecosystem development, positioning the BTC ecosystem for a potential multi-hundred-billion-dollar market expansion.

4 HEX: Concept and Design

Hexadecimal, also stylized as Hex, is a numeral system that uses the digits 0-9 and A-F to represent values. In computer science, hexadecimal is most commonly used to represent binary numbers. Therefore, Hex is a symbol of computer powering.

Over the last years, Bitcoin has become the "***digital gold***" of crypto world. It is the biggest consensus by now. The design purpose of Bitcoin is to make it a world currency that is anti inflation.

However, due to nature of Bitcoin network, most of Bitcoin don't transfer as it is supposed to be. Most miners just hold and sell when the price goes up.

So crypto currency that is Anchored to Bitcoin and can be circulated and represting the value of other digital assets is need.

4.1 Introduction to HEX

Bitlen team introduces Hexadecimal Dollar (HEX), the first Bitcoin pegged stablecoins that is **interest bearing**.

4.1.1 How Interest Generated

The interest is generated from Yield of BTC staking. Bitlen supports two types staking. First type is native staking, which is extension development of BIP 65, and BIP 420..

Second type is aggregation of existing third party staking protocols, wheather it is side chains or BTC layers, such as Core, Bsquare, Babylon, BounceBit etc.

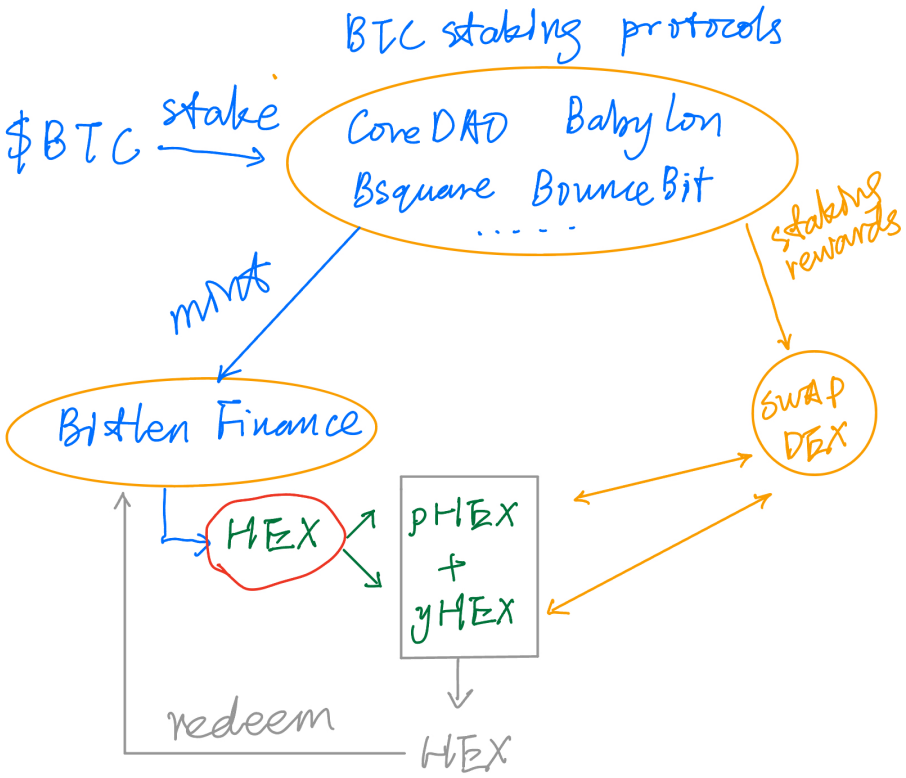

Figure 1: Overview of How HEX works

All these protocols generates yield in the form of their tokens, which is extra income for BTC holders. The rationals of yield generation behind these protocols are not in the scope of this lite paper.

4.1.2 Mint

Each staked BTC can be minted 2^16 HEX

1 BTC = (**a**) 65, 536 HEX

Each Hex can be further divided into pHEX and yHEX which represents the principle part of HEX and yield of HEX

1 HEX = 1 pHEX +1 yHEX

Due the volatile of BTC price, we need to put a factor **a** so that the pHEX is equal to 1 USD at **the point of minting**.

4.1.3 Usage

pHEX will be stable coin that will used in SWAP and DEX in all our supporting protocols. So that it carries the assets value of BTC staked in the protocols.

yHEX representing the yield or interest from staking. And in most cases, such yield are given in the forms of different protocol tokens such as Core, BB or B2. We will have a swap that changes convert that rewards into HEX.

Both pHEX and yHEX are tradable in the market, and their prices will up and down due to the expectation of BTC yield and demand of redemption.

4.1.4 Redemption

pHEX and yHEX must be paired first and then redeemed. Redeemed HEX will be burned.

4.2 Mechanism of Stability

By introducing the factor when minting process, 1pHex is stabilised as 1 USD, as more transaction incurred , the supply of pHEX and yHEX might change and create demands in the free trading market.

After TGE of Bitlen governance token (LEN), Bitlen foundation will be responsible for ensuring the stability of HEX.

4.3 Use Cases and Applications

HEX (pHEX and yHEX) will be used in various scenarios including trading of pHEX, yHEX before redemption in the DEX and coversion of rewards tokens to yHEX in the SWAP

5 Technical Architecture

5.1 Blockchain Infrastructure

The Bitcoin blockchain infrastructure relies on a combination of cryptographic principles, decentralized consensus mechanisms, and economic incentives to maintain a secure, transparent, and immutable ledger of transactions. This infrastructure allows Bitcoin to function as a decentralized digital currency without the need for a central authority.

5.2 Smart Contracts

Many of these additional use cases have been developed on alternative blockchains with more expressive scripting languages, such as Ethereum and Solana, as Bitcoin Script is rather limited in terms of overall functionality.

Through the use of smart contracts written in some of the more expressive cryptocurrency scripting languages, alternative blockchains have been able to

attract millions of users who are interested in more than watching number go up or making uncensorable transactions.

Since there is no smart contract layer on Bitcoin, HEX contracts have to be expressed in terms of UTXO transactions written in the Bitcoin script . Each UTXO transaction spends funds from the UTXO set and the Bitcoin Script provides a small number of opcodes to specify conditions for spending the funds.

5.3 Security Measures

6 Economic Model

6.1 Tokenomics

The HEX ecosystem is built upon a robust tokenomics model featuring three distinct tokens: LEN, pHEX, and yHEX. Each token serves a unique purpose within the ecosystem, contributing to its stability, governance, and growth.

6.1.1 LEN: Governance Token

LEN is the governance token of the HEX ecosystem. Holders of LEN have the power to participate in the decision-making processes that shape the future of HEX. This includes voting on key proposals, such as adjustments to the economic model, changes to governance protocols, and other significant decisions that impact the ecosystem. The LEN token ensures that the community has a voice and plays an active role in the development and direction of the HEX platform.

6.1.2 pHEX: BTC-Pegged Stablecoin

pHEX is the primary stablecoin within the HEX ecosystem, pegged to Bitcoin (BTC) at a fixed ratio of 1 BTC = 65536 pHEX. This pegging mechanism ensures that pHEX maintains its value in BTC terms, providing a stable and reliable medium of exchange. pHEX is designed to be easily accessible and usable for everyday transactions, lowering barriers to entry and fostering broader adoption within the BTC ecosystem. By offering stability in BTC terms, pHEX aligns with the vision of BTC maximalists and enhances the overall utility of the Bitcoin network.

6.1.3 yHEX: Yield-Bearing Token

yHEX is the yield-bearing token in the HEX ecosystem. It represents an interest-bearing version of pHEX, allowing holders to earn a return on their holdings. By leveraging native BTC staking solutions and partnerships with platforms like Babylon and FBTC, yHEX enables users to earn yield on their BTC-backed assets. This incentivizes holding and using yHEX, contributing to increased liquidity and stability within the HEX ecosystem.

6.1.4 Interactions Between Tokens

The interactions between LEN, pHEX, and yHEX are designed to create a balanced and sustainable economic model:

- **Governance**: LEN holders can vote on proposals that may impact the issuance, staking rewards, and overall management of pHEX and yHEX. - **Stability**: The fixed ratio of pHEX to BTC ensures stability, while market dynamics and governance mechanisms maintain the peg. - **Yield Generation**: yHEX provides an avenue for users to earn yield on their pHEX holdings, enhancing the attractiveness of the HEX ecosystem.

In summary, the tokenomics of HEX are structured to promote stability, governance, and yield generation. LEN empowers the community with governance rights, pHEX offers a stable BTC-pegged currency, and yHEX provides yield opportunities, collectively fostering a vibrant and sustainable BTC ecosystem.

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6.2 Minting and Burning Mechanism

HEX employs a sophisticated minting and burning mechanism that ensures stability and integrates seamlessly with the BTC Layer 1 network. This process involves interacting with BTC Layer 1 through specific script scripts to stake BTC, allowing users to mint HEX tokens. The HEX tokens are minted on CoreDAO and BSquared, following the ERC-20 standard.

6.2.1 Minting Process

The minting process of HEX involves the following steps:

1. **BTC Staking**: Users stake their BTC by interacting with a specialized script on the BTC Layer 1 network. This script securely locks the BTC and records the staking transaction. 2. **Minting Rights**: Upon successful staking, users are granted the right to mint HEX tokens. Specifically, for every 1 BTC staked, users can mint 65536 pHEX and 65536 yHEX. 3. **HEX Minting**: HEX tokens are then minted on CoreDAO and BSquared, adhering to the ERC-20 standard. These tokens are fully compliant with Ethereum-based protocols, allowing for broad compatibility and usability within the DeFi ecosystem.

6.2.2 Burning Process

The burning process is designed to ensure the seamless redemption of BTC and involves the following steps:

1. **Burning Initiation**: Users initiate the burning process by interacting with the burning smart contract on the Layer 2 network. This involves burning the required amount of pHEX and yHEX tokens. 2. **Decentralized Message Transmission**: The burning transaction is recorded, and a message is sent via a decentralized information transmission component to the BTC Layer 1 network. This ensures the secure and verifiable communication of the burning event. 3. **BTC Redemption**: Upon verification, the time lock on the user's

BTC balance on Layer 1 is removed. This unlocks the staked BTC, restoring its liquidity and completing the redemption process.

The fixed exchange rate of 1 BTC = 65536 pHEX and 65536 yHEX ensures a stable and predictable value exchange between BTC and HEX tokens.

6.3 Incentives for Stakeholders

HEX incentivizes stakeholders through a carefully designed rewards system that benefits both the minting participants and long-term holders. The incentives aim to foster participation, increase liquidity, and enhance the overall stability of the HEX ecosystem.

6.3.1 Rewards for HEX Minters

When users participate in the minting process by staking BTC, they not only receive pHEX but also yHEX tokens. The yHEX tokens are designed to provide staking rewards, thereby incentivizing users to mint and hold HEX. The key incentives for HEX minters include:

1. **Staking Rewards with yHEX**: Minters receive yHEX tokens in addition to pHEX. These yHEX tokens can be staked to earn a yield, leveraging native BTC staking solutions. This provides a continuous income stream for users, making the minting process more attractive.

2. **LEN Token Incentives**: As an additional reward, minters are also eligible to receive LEN governance tokens. The amount of LEN tokens awarded is proportional to the Total Value Locked (TVL) by the user in the HEX ecosystem. This not only incentivizes higher participation but also aligns the interests of the users with the governance and long-term success of the HEX platform.

6.3.2 Benefits of LEN Tokens

LEN tokens empower stakeholders by granting them voting rights within the HEX ecosystem. This includes the ability to vote on key proposals, such as adjustments to the economic model, governance protocols, and other critical decisions. By holding LEN tokens, users can actively participate in shaping the future of HEX, ensuring that the platform evolves in a way that benefits the entire community.

6.3.3 Enhancing Liquidity and Stability

The incentive structure is designed to enhance liquidity and stability within the HEX ecosystem. By rewarding participants with staking yields and governance tokens, HEX ensures a continuous flow of assets within the ecosystem. This helps maintain a stable supply and demand balance, reducing volatility and promoting a healthy, sustainable market.

7 Conclusion

This white paper has introduced HEX, a BTC-pegged stablecoin designed to enhance stability, accessibility, and yield within the BTC ecosystem. HEX is the first BTC-pegged stablecoin, aligned with Satoshi Nakamoto's vision, aiming to lower transaction barriers and attract more users and liquidity to the BTC ecosystem. Existing stablecoins face challenges such as the lack of interest-earning capabilities and centralization risks. HEX addresses these issues by providing a BTC-pegged stablecoin with yield generation through native BTC staking solutions.

The HEX economic model features three tokens: LEN (governance), pHEX (BTC-pegged stablecoin), and yHEX (yield-bearing), promoting stability, governance participation, and yield generation. The minting and burning mechanisms ensure stability and integration with BTC Layer 1 through secure processes, maintaining a fixed exchange rate. HEX offers staking rewards with yHEX and governance participation with LEN, encouraging active engagement and promoting long-term success.

In conclusion, HEX aims to bridge the gap between Bitcoin's potential and its current ecosystem by providing a stable, accessible, and yield-generating digital currency, driving significant growth and adoption within the BTC ecosystem.