TRUSTED
SMART CHAIN

Whitepaper

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Abstract

TSC is a purpose-driven blockchain designed to mitigate the inherent volatility seen in many cryptocurrency markets, where assets often lack underlying value, resulting in increased financial risk. TSC addresses this challenge by facilitating the tokenization of real-world assets (RWAs), introducing a foundation for asset stability beyond traditional supply and demand dynamics. Through this framework, TSC provides a reliable infrastructure that supports a more stable value ecosystem, where tokens are underpinned by tangible assets, offering resilience against speculative fluctuations. Built to deliver high transaction throughput, low fees, and secure smart contract execution, TSC serves as a robust and scalable platform tailored for the tokenization of RWAs. This approach not only enhances investor confidence but also advances the use of blockchain technology in creating sustainable, value-backed digital assets.

Problem

The cryptocurrency and blockchain markets are plagued by extreme valuation volatility, creating significant challenges for speculative and long-term investors alike. The majority of cryptocurrencies derive their value purely from speculation and the forces of supply and demand, resulting in unstable and unreliable stores of value. This volatility often appeals to high-risk investors attracted to the potential for rapid gains, but it simultaneously deters risk-averse individuals who prioritize stability and long-term growth.

According to a survey conducted - prior to the pandemic - this volatility remains a key barrier to entry for investors seeking more secure and dependable assets for their portfolios. The lack of foundational value behind many cryptocurrencies further exacerbates this issue, leaving a substantial portion of the market underserved and discouraging broader adoption of blockchain-based financial systems. (*Smunty, 2021*)

Solution

The TSC blockchain is engineered to focus on the tokenization of Real World Assets (RWAs), including real estate, infrastructure projects, intellectual property, and other tangible and intangible assets. Leveraging smart contracts and blockchain technology, TSC creates a secure, transparent framework for fractionalizing asset ownership, unlocking liquidity channels, and facilitating seamless integration with traditional financial systems.

TSC's system reduces barriers to entry for investors by simplifying participation in the blockchain and cryptocurrency markets, providing access to potentially stable, high-value projects for those with the capital and willingness to invest but limited knowledge or access to blockchain technology. By prioritizing the maturation of the RWA market, TSC brings innovative projects and investment options to the blockchain world, enabling investors to diversify their portfolios while contributing to global economic growth and innovation.

Value Proposition

TSC introduces a cryptocurrency designed to derive its valuation from traditional assets by tokenizing the cash flow or ownership of these assets. This innovative approach aims to provide consistent returns to investors while funding unique and impactful projects across the globe. With a strong emphasis on transparency and clarity, TSC ensures that users and investors have access to accurate and comprehensive information about each project, empowering them to make well-informed decisions. By democratizing access to high-value assets and bridging the gap between traditional finance and blockchain technology, TSC fosters a more inclusive and efficient financial ecosystem.

Introduction

This whitepaper presents an innovative blockchain framework called the Trusted Smart Chain (TSC) that utilizes a Proof of Stake (PoS) consensus mechanism to enable the secure and efficient management and listing of Real-World Assets (RWAs). As the demand for reliable and transparent asset management solutions grows, the PoS-based platform aims to bridge the gap between traditional asset management and the developing world of blockchain technology. By leveraging the stake of trusted validators, the network ensures rapid transaction processing, enhanced security, and regulatory compliance, making it an attractive option for individuals and institutions looking to engage with RWAs in a digital format. Through the integration of cutting-edge decentralized blockchain technology with trusted validation processes, we aim to create a robust platform that empowers users to fully realize the potential of their real-world assets in a secure and efficient manner.

Vision and Mission

Trusted Smart Chain (TSC) is a Layer 1 blockchain designed to bring the security and transparency of decentralized technology to real-world assets. By facilitating the tokenization of assets such as real estate, commodities, bonds, and more, TSC aims to create new investment opportunities and make financial markets more efficient, secure, and transparent.

TSC's mission is to connect communities and transform blockchain by providing a reliable infrastructure that supports a more stable value ecosystem, where tokens are underpinned by tangible assets, offering resilience against speculative fluctuations.

Through its decentralized governance model and commitment to mitigating financial risk, TSC seeks to empower individuals and institutions to participate in a more inclusive and equitable financial system.

Core technology

Blockchain

TSC leverages blockchain technology to address the unique needs of the emerging RWA crypto market through the creation of a transparent, efficient, and secure ecosystem. The Layer 1 blockchain acts as a trustless payment system enabling direct interactions between strangers without a third-party intermediary through the decentralization of trust. This ensures fair compensation on both sides and builds trust in the system itself as an immutable ledger of performance that upholds the integrity of all transactions within the ecosystem.

Tech Stack

TSC's decentralized blockchain is powered by a network of nodes purchased by a third party hired to sell and maintain the distribution of nodes that will deploy the blockchain on the open market. This distribution will incentivize investors and tech enthusiasts alike to purchase said nodes to support the development of the RWA market through the development of the TSC blockchain.

Nodes

Initially, a total of 200,000 nodes will be made available for purchase. The first 5,000 nodes will be offered during a presale at a price of $1,500 USD each, while all remaining nodes will be sold at $2,500 USD per node and increasing $100 USD per node for every 1000 nodes sold eventually reaching a maximum sales price of $10,000 USD per node. These nodes will participate in mining activities and automatically maintain the blockchain ledger when operating. Active holders will be rewarded for their contributions to network security and validation, with digital rewards distributed by the network to both nodes and validators.

Node NFTs

After the initial purchase of the first 5,000 nodes, each node owner will receive a non-fungible token (NFT) that certifies their ownership of the respective node, securely recorded on the decentralized blockchain. This NFT will be issued on the T7X exchange, ensuring transparent and verifiable proof of ownership, as well as acting as a beacon for the rewards of the node operations going into that specific wallet. Any nodes purchased beyond the initial 5,000 will also come with their own NFT, providing all node owners with a digital deed.

Validators

Validators play a crucial role in the TSC blockchain ecosystem, serving as the official miners responsible for validating transactions and maintaining the integrity of the blockchain. To become a validator, nodes must stake the equivalent of $10,000 USD in TSC during the pre-fair launch phase or $25,000 USD in TSC post-fair launch. While nodes act as inputs for transactions and custodians of the blockchain's genealogy, validators actively confirm transactions and secure the network. Validators are rewarded daily with distributions and earn transaction fees for each block they validate. However, users who choose to unstake their TSC will lose their validator status, reinforcing the commitment required to maintain a robust and reliable blockchain network.

Consensus Algorithm

Proof of Stake (PoS) is a consensus mechanism used in blockchain systems that relies on validators who hold a certain amount of cryptocurrency as a stake to confirm transactions and create new blocks. Unlike Proof of Work (PoW), which requires intensive computational power, PoS selects validators based on the amount of cryptocurrency they hold and are willing to "lock up" as collateral. In a PoS system, validators are incentivized to act honestly, as any malicious behavior could lead to the loss of their staked assets. To become a validator on the Trusted Smart Chain (TSC), participants must stake USD equivalent and must be paid in TSC tokens, which can be earned through mining, purchasing, or digital rewards. The amounts adjust based upon timing with the Pre-Fair Launch staking at 10,000 USD equivalent in TSC, and Post Fair Launch at 25,000 USD equivalent in TSC.

The Proof of Stake (PoS) mining process differs significantly from traditional mining methods as it relies on validators staking cryptocurrency rather than on computational power to secure the network. In PoS, validators must hold a certain amount of cryptocurrency as collateral to be eligible for block validation. When users initiate transactions, these transactions are submitted to the network and enter a transaction pool awaiting processing. A validator is then selected to create a new block, often chosen through a combination of factors such as the amount of cryptocurrency staked, the length of time it has been staked, and sometimes randomization to ensure fairness.

Payment Verification System

The Payment Verification process for the TSC system is designed to ensure that transactions are validated both quickly and securely by validators who have a financial stake in the network. The selected validators gather pending transactions, bundles them into a block, and signs it using their private key, providing cryptographic proof of their stake in the network. This signed block is then broadcast to other validators for verification. Other validators check the accuracy of the transactions and the signature to confirm the block's legitimacy. If a sufficient number of validators, typically a majority, approve the block, it is added to the blockchain, allowing for faster processing times compared to PoW systems. Validators in PoS systems are incentivized to act honestly, as any dishonest behavior could result in penalties, including losing part or all of their staked tokens. Validators also receive digital rewards, such as transaction fees or newly created tokens, for their role in creating and validating blocks, thus encouraging active and honest participation.

TSC Ecosystem

As the designated blockchain of the T7X ecosystem for Real World Asset (RWA) projects, TSC serves as the foundational layer supporting all RWA investment activities. Each RWA investment token within the ecosystem will be issued as an L2 token pegged to TSC, ensuring seamless integration and interoperability across projects. This pegged structure not only provides stability but also enhances the efficiency and transparency of transactions within the ecosystem.

All RWA projects are required to purchase TSC tokens directly from T7X to facilitate the distribution of investment returns to RWA token holders. This mechanism ensures that TSC remains central to the financial operations of the ecosystem, driving consistent demand for the token. By establishing

TSC as the backbone of RWA project operations, the T7X ecosystem creates a unified and efficient framework for managing asset tokenization, investor returns, and ecosystem sustainability.

Tokenomics

Our Tokenomics mirror Bitcoin's Structure from over a decade ago in order to maximize the attraction of users searching for systems they can understand. Our goal is to reduce the amount of time it takes for users to understand the system to incentivize participation by offering potential for growth over the next several years.

The total supply of TSC is capped at 21 million.

Tokens will be distributed once per day with percentages as follows starting from the first distribution:

> 80% of daily distributions will go to active node holders and validators supporting the blockchain.
>
> 20% of daily distributions will go to a Bonus Pool that is paid out at the end of the quarter (90 days).

TSC will implement a reward halving every four years, aligned with its genesis date, to maintain consistency with its inflationary hold strategy. This mechanism ensures a gradual reduction in the rate of new coin issuance, promoting long-term scarcity and preserving the value of the currency over time.

The block time for TSC is set at 10 minutes.

Tokens are created daily during every distribution. The release schedule is as follows:

	Daily amount distributed:	Total Amount Distributed per year:	Cumulative amount Distributed:
Years 0-3	7,191.78 TSC	2.625 million TSC	10.5 million TSC
Years 4-7	3595.89 TSC	1.3125 million TSC	15.75 million TSC
Years 8-11	1797.94 TSC	656.25 thousand TSC	18.375 million TSC

Bonus Pool

20% of all distributions are allocated to a bonus pool, which is paid out at the end of each quarter (90 days). Node owners have the option to send part, or all of the coins received in their wallet (their 80%) to the bonus staking pool. A five percent transaction fee is deducted when any node owner moves coins from their node wallet to the bonus pool. Additionally, validators charge a gas fee for these transactions. Distributions from the bonus pool are calculated daily based on the amount of coins staked each day, with each coin staked earning a share of the pool.

Token Utility

T The TSC token serves as the lifeblood of the TSC blockchain, powering every key operation within the ecosystem. It will be required for purchasing nodes, staking as validators, and swapping into and out of any L2 tokens on the TSC chain. Beyond these critical functions, TSC tokens will also be utilized for transaction fees, staking, and any other processes conducted on the blockchain. This central role ensures that TSC remains integral to the network's functionality and growth, driving its utility and demand as the ecosystem evolves.

Reward Withdrawals

When withdrawing TSC tokens from a Prosper wallet, a 5 % withdrawal fee is applied. All TSC withdrawn as a fee is sent directly to a burn wallet, where it is permanently removed from the ecosystem. This burn mechanism serves to reduce the total supply of TSC tokens over time, helping to maintain scarcity and support the token's value. Regular updates are provided every 30 days, reporting the Real-World Value (RWV) of the tokens burned, which helps keep the community informed about the deflationary impact of the burn process. The combination of regular bonus distribution and the burn mechanism ensures a balanced and sustainable token ecosystem.

Market Analysis

The market for Real-World Asset (RWA) tokenization is growing rapidly, driven by both technological advances and increasing institutional interest in blockchain solutions. The total market for tokenized RWAs is projected to reach as high as $30 trillion by 2030, with early examples in sectors such as real estate and traditional finance leading the way. (*Top 5 Crypto Projects Tokenizing Real-world Assets (RWAs) in 2024)* The appeal of tokenizing physical assets lies in the ability to unlock liquidity, provide transparency, and streamline transactions that historically relied on slow, traditional methods. This burgeoning market is being fueled by institutions like BlackRock and various fintech firms, which are eager to integrate blockchain technology to enhance their operational efficiency. (*Wolfson, 2024*)

Despite the promising outlook, the RWA tokenization sector faces several challenges, including regulatory hurdles and the need for greater market adoption. While the positive shift in global regulatory sentiment has sparked renewed interest, particularly in the U.S., the full integration of RWAs into both traditional finance (TradFi) and decentralized finance (DeFi) ecosystems will require further infrastructure development and robust compliance frameworks. As platforms designed for RWA tokenization continue to scale, the focus will likely shift towards establishing clear regulatory guidelines and ensuring that tokenized assets are easily tradable while maintaining investor protection. (*Wolfson, 2024*)

Implementation Plan

Phase 1: TSC Blockchain Genesis and Distribution

The TSC blockchain officially launches, marking the genesis of the network. During this phase, the initial distribution of TSC tokens begins, laying the foundation for the ecosystem. Nodes are set up to support the blockchain's infrastructure, and early adopters can stake tokens to become validators. This phase focuses on establishing a secure and transparent blockchain environment, ensuring smooth operations and reliability from the beginning.

Phase 2: Token Listed on T7X and Trading Begins

TSC tokens are officially listed on the T7X platform, making them available for trading. This milestone provides liquidity to early adopters and investors, allowing them to buy, sell, or hold TSC tokens. The listing introduces the token to a broader audience, increasing visibility and attracting additional participants to the ecosystem. Trading activity during this Phase also establishes a market value for TSC, solidifying its role within the blockchain and RWA projects.

Phase 3: TSC is Required to Purchase Nodes

In this Phase, the requirement to use TSC tokens to purchase nodes is introduced, reinforcing the token's centrality to the ecosystem. Node ownership provides users with an active role in the network by supporting transaction processing and blockchain maintenance. This requirement drives demand for TSC tokens and incentivizes participants to engage directly with the blockchain's infrastructure, fostering a decentralized and sustainable system.

Phase 4: All Assets Begin L2 RWA Distributions in TSC

All Real-World Asset (RWA) projects within the ecosystem transition to using TSC tokens for investment return distributions. RWA projects convert their revenue or returns into TSC, which is then distributed to token holders. This integration aligns all RWA operations with the TSC blockchain, ensuring a unified and efficient framework for managing returns, enhancing transparency, and driving consistent token utility.

Phase 5: TSC Swap Function into L2 Projects

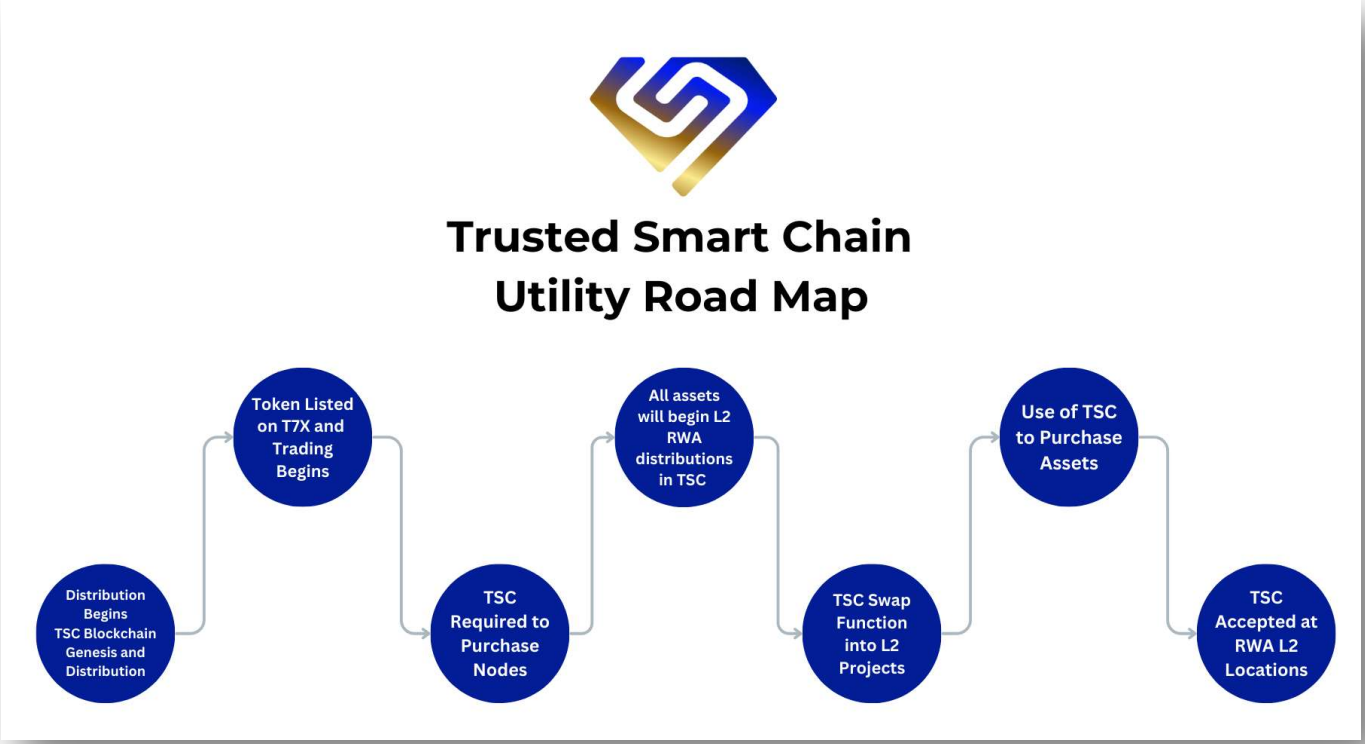
The TSC blockchain introduces a swap function, allowing users to exchange TSC tokens directly into L2 project tokens. This feature simplifies access to various RWA investments, enabling seamless participation across multiple projects within the ecosystem. The swap functionality ensures interoperability between TSC and L2 tokens, reducing barriers for investors and enhancing the overall user experience.

Phase 6: Use of TSC to Purchase Assets

TSC tokens become a medium of exchange for purchasing assets within the ecosystem. This phase expands the token’s utility, allowing users to directly acquire tangible and intangible assets through the blockchain. By enabling asset purchases, TSC bridges the gap between cryptocurrency and real-world applications, solidifying its role as a functional and valuable currency within the ecosystem.

Phase 7: TSC Accepted at RWA L2 Locations

As the final Phase, TSC tokens are adopted as a recognized currency at Real World Asset (RWA) L2 project locations. Users can use TSC for transactions such as renting, purchasing, or investing directly with these projects. This widespread acceptance further integrates TSC into real-world operations, enhancing its practicality and cementing its position as a key driver of the T7X ecosystem.



Incentives for Participation

Individuals may want to run a blockchain node to actively support the network's security and decentralization. By doing so, they maintain a full, independent copy of the blockchain, allowing them to verify transactions without relying on third parties. This not only grants them more control over their interactions but also enhances their privacy. In some cases, running a node can also yield digital rewards, such as earning cryptocurrency, depending on the specific blockchain's reward system.

A Proof of Stake (PoS) blockchain that holds Real-World Assets (RWAs) offers several appealing advantages, encouraging individuals to engage with the network. First, PoS systems rely on a network of staked validators who have a vested interest in the network's integrity. This approach provides a high level of security, as validators are financially incentivized to act honestly. By requiring validators to hold a stake, PoS instills confidence among participants, as malicious actions could lead to financial penalties, fostering a secure and reliable network.

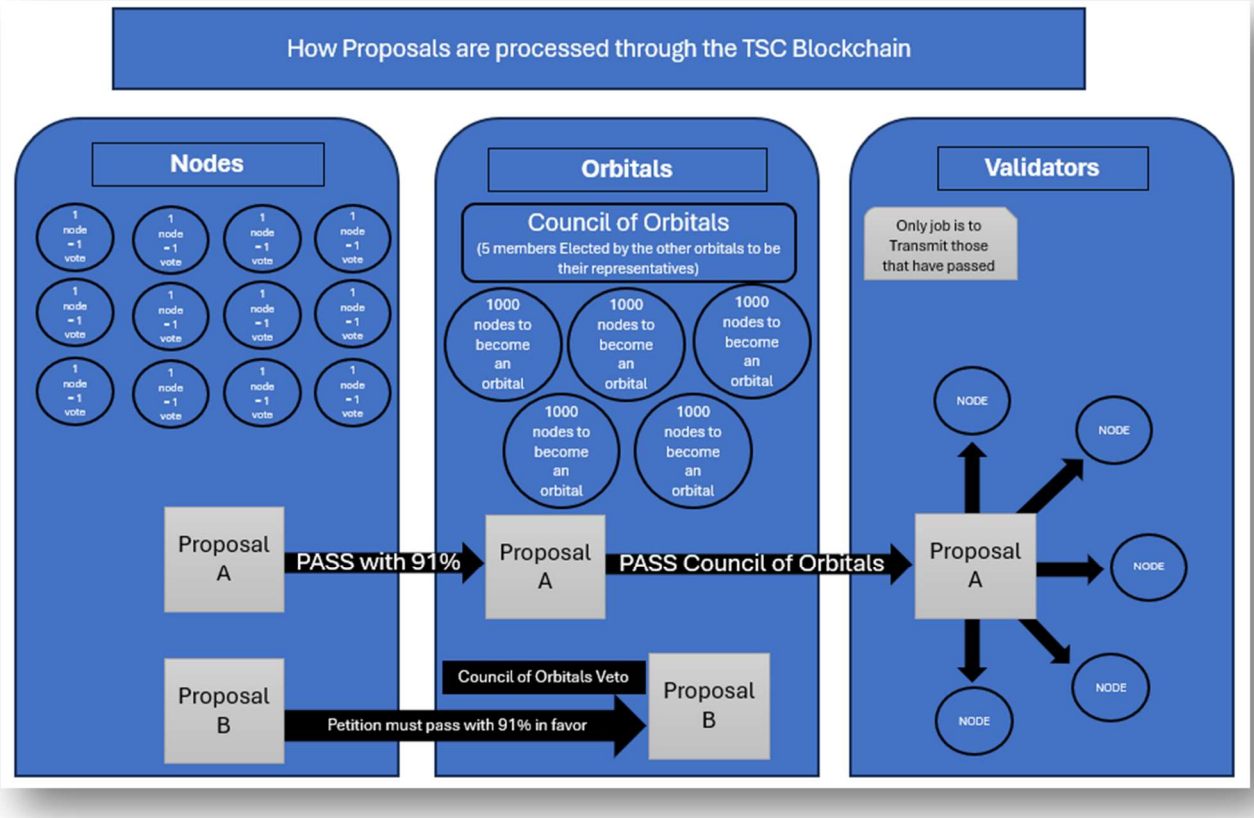
Additionally, PoS blockchains typically enable faster and lower-cost transactions compared to Proof of Work (PoW) systems, making them well-suited for real-world assets where efficiency is paramount. Tokenizing RWAs on a blockchain enhances liquidity, allowing users to buy, sell, or trade fractional ownership of assets with ease, offering greater flexibility and diversification. The PoS structure can also support regulatory compliance, as staked validators can be vetted to ensure adherence to legal standards, building trust among regulators and participants.

PoS blockchains often foster opportunities for community involvement and governance. Participants can contribute to decisions regarding the network's direction and the management of RWAs, fostering a sense of ownership and collaboration within the decentralized ecosystem.

Governance and Compliance

Governance Structure

The governance model incorporates a balanced approach to managing decision making effectively across different layers. In the nodes section, the process remains decentralized, allowing all node holders to vote on proposals. Each node holder has an equal say in determining whether a proposal moves forward. For a proposal to pass this stage, it must achieve a 51% approval rate from the node holders. Once a proposal reaches sufficient support, it moves to the orbital sector where a more focused review occurs. In this sector, an "Orbital Council" - consisting of five elected



members - reviews the proposal. These five individuals, selected by the Orbitals, vote on whether to approve or reject the proposal. The process here involves only 5 members, making it more streamlined to the larger node base.

If the Orbital Council approves the proposal, it is escalated to the validators who are responsible for broadcasting it across the entire system. However, if the proposal is rejected by the Orbital Council, it is sent back to the notes section where it can be put back up for vote among the nodes. If, upon revoting, it receives a 91% approval rate from the nodes, the proposal will be sent directly to the validators for broadcasting. This system balances decentralized input from node holders with a more efficient decision-making process at the higher council level, ensuring that final proposals are thoroughly vetted prior to implementation.

Regulatory Compliance

Ensuring TSC is compliant with international laws and regulations is a priority of TSC's operational longevity. We aim to stay compliant with global regulations, conduct regular audits on all third-party organizations, and keep the data of our users private and secure.

Risk Analysis

The risk landscape for TSC encompasses several dimensions, including market volatility, regulatory uncertainties, and operational vulnerabilities. Market risks are particularly relevant as TSC operates within the rapidly evolving RWA crypto market. Sudden shifts in demand, competition from other projects, or broader cryptocurrency market downturns could impact the adoption and stability of TSC. To mitigate these risks, TSC incorporates mechanisms such as the bonus pool model to manage supply, stability reserves to address price fluctuations, and diversification strategies to ensure resilience against external shocks.

Operational and regulatory risks are also critical considerations. Technical failures, security breaches, or disruptions in node operations could undermine trust and impact TSC's ability to deliver value to its users. Similarly, evolving regulatory landscapes pose challenges, particularly as global jurisdictions implement varying compliance requirements for stablecoins and RWA-backed tokens. To address these concerns, TSC employs rigorous security measures, including regular audits and multi-layered safeguards, while actively engaging with regulators to align operations with global standards. These measures collectively ensure that TSC remains robust and compliant in an uncertain environment.

Road Map

Short Term (0 – 12 Months)

1. Token Launch and Distribution – Launch the TSC blockchain and tokens; Initiate the staking and node hosting program to encourage early adoption and participation.
2. Platform Development – Implement the minting, redemption, and bonus hodl pool; Deploy the smart contract infrastructure to support transaction stability.

3. Regulatory compliance – Collaborate with legal experts to ensure and maintain global compliance standards.
4. Audits – Conduct audits of all third parties to ensure compliance.
5. Advanced Technological Features – Introduce a public dashboard for real-time reporting of reserves and burned tokens; explore cross-chain interoperability across multiple blockchains and exchanges; Develop advanced analytic tools for performance tracking of token flow.

Long Term (1 – 5+ years)

1. Ecosystem Growth – Forge partnerships for large scale adoption of RWA tokenization.
2. Regulatory Approvals – Obtain Regulatory approvals in key markets worldwide; Participate in global discussions on stability in crypto and RWA Market frameworks.
3. Create Dao and Voting Mechanisms

Conclusion

The proposed TSC decentralized blockchain framework, built on a Proof of Stake (PoS) consensus mechanism, offers a transformative solution for managing Real-World Assets (RWAs). By leveraging staked validators, the platform ensures efficient transaction processing, enhanced security, and strong alignment with regulatory compliance. This makes TSC particularly suited for individuals and institutions seeking to interact with RWAs in a decentralized environment. Furthermore, the use of non-fungible tokens (NFTs) as proof of ownership for nodes encourages user engagement and simplifies asset transferability within the network, making interactions seamless and accessible for all participants.

As we move forward, the decentralized TSC ecosystem is set to revolutionize asset management by delivering unmatched transparency, accessibility, and accountability. With its strong foundation in PoS, TSC provides a secure and reliable framework that meets the evolving needs of digital asset holders. We invite participants to explore the vast potential of this innovative decentralized blockchain and to join us, as community members, in shaping the future of digital asset management with confidence and foresight.

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