

THOR Chain Report

Valour Insights powered by
Reflexivity Research

valour

REFLEXIVITY
RESEARCH

About the Authors

Valour

Valour Inc. and Valour Digital Securities Limited (together, "Valour") is a trusted leader in issuing exchange-traded products ("ETPs") that enable retail and institutional investors to access digital assets like Ethereum in a simple and secure way via their traditional bank account. Valour is part of the asset management business line of DeFi Technologies Inc. (CBOE CA: DEFI) (GR: R9B) (OTC: DEFTF). Backed by a globally esteemed team of experts with extensive experience in financial markets and digital assets, we are committed to revolutionising the way individuals and institutions interact with the evolving digital asset ecosystem.

Reflexivity Research

Reflexivity Research is one of the fastest growing research firms in the disruptive world of blockchain and cryptocurrencies. The company, founded by Will Clemente and Anthony Pompliano and acquired by DeFi Technologies Inc., aims to provide crypto-native research in easily digestible formats for traditional finance (TradFi) investors. Since launch, Reflexivity Research has partnered with some of the largest financial companies in the world and counts readers across major hedge funds, public company C-Suites and the most respected family offices. You can subscribe at www.reflexivityresearch.com



Table of Contents

THOR Introduction

04

Crypto’s “Cross-chain” Evolution

05

How Does THORChain Solve Cross-Chain Swaps?

05

RUNE Token and Protocol Security

06

Economic Security Model

07

Valour RUNE SEK

09

Conclusion

09

THOR

Introduction

THORChain represents a departure from traditional single-chain automated market makers (AMMs) by providing a similar experience but allowing the swapping of native assets across multiple chains. The protocol is designed with the highest levels of decentralization and security in mind, ensuring BTC (and other supported assets) is secured in an over-collateralized fashion by an anonymous, permissionless set of validators.

THORChain is an independent blockchain and decentralized exchange (DEX) facilitating seamless cross-chain native asset swaps. It stands out by enabling direct exchanges between various cryptocurrencies, such as bitcoin (BTC) and ether (ETH), without the need for cross-chain bridges or wrapped tokens—a common need within the current crypto ecosystem that subjects users to additional (and often exploited) risks. THORChain's mission is to address and streamline the complexities surrounding cross-chain swaps and the fragmented liquidity landscape, offering a unified and decentralized liquidity network accessible to all chains. As of 2024, THORChain supports native asset swaps between Bitcoin, Ethereum, BNB Chain, Avalanche, Cosmos Hub, Dogecoin, Bitcoin Cash & Litecoin.



Crypto's "Cross-chain" Evolution

The expansion of the crypto economy over the years, fueled by the emergence of Layer 1 blockchains and the evolution of DeFi, demands interoperability across various blockchain networks. This has led to the development of cross-chain technologies and bridges that enable the transfer of assets, enhancing the functionality and accessibility of different blockchain ecosystems.

Centralized exchanges (CEXs) traditionally facilitated asset transfers across blockchains but are inherently limited by their centralized nature. This centralization introduces counterparty risk, as users must rely on the exchange's internal systems and custodial services, which can become points of vulnerability, as evidenced by historical failures (e.g., FTX).

Blockchain bridges, designed to connect disparate blockchain networks, promise improvements over CEXs by enabling direct asset swaps without custody risk. However, these bridges have their own set of challenges, including security risks, centralization concerns, and the reliance on "wrapped" assets. Wrapped assets, representing IOUs of the original asset on a different blockchain, add complexity and introduce risks not present with native assets.

Wrapped assets are inferior to native assets because:

- Wrapped assets are IOUs on the original asset (an IOU is never as good as the real thing because it involves some form of counterparty risk)
- Wrapped assets fragment and compete with liquidity from the native asset
- Wrapped assets as collateral in DeFi can "depeg," resulting in liquidations that are not possible if holding the native asset
- In some instances, wrapped assets require an external oracle for pricing, which is another vector of risk

In contrast, solutions like THORChain don't suffer from these limitations, enabling direct asset swaps and utilizing its Bifröst Protocol for cross-chain interoperability. This approach not only mitigates the risks associated with wrapped assets and centralization but also unlocks significant value by leveraging dormant capital in a trust-minimized environment, setting it apart from traditional CEXs and bridges.

How Does THORChain Solve Cross-Chain Swaps?

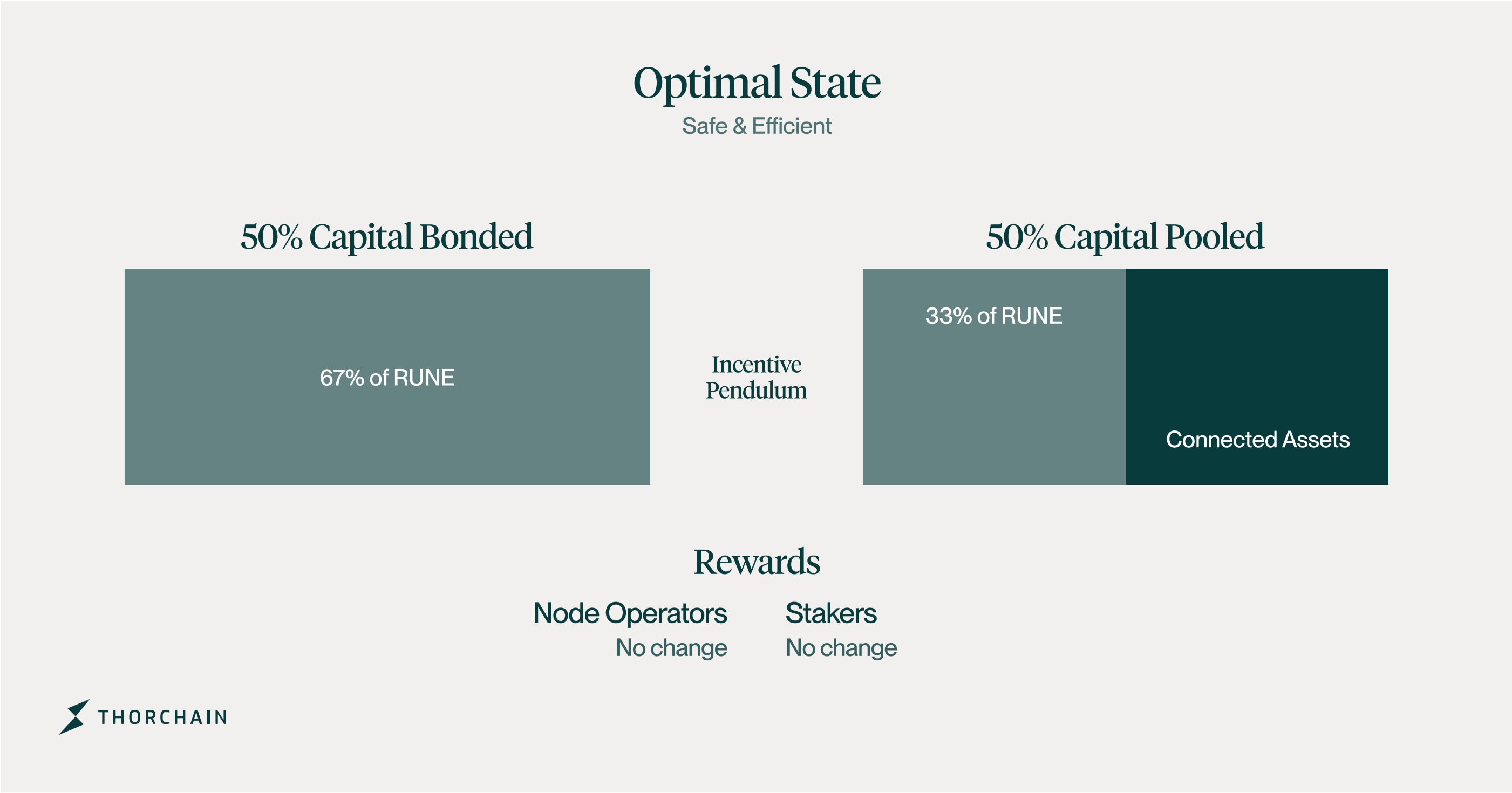
As previously mentioned, THORChain enables native asset swaps across multiple chains, such as converting native BTC to ETH, without necessitating intermediaries or the custody risk inherent in using a CEX. In addition, pricing on THORChain is both transparent and independent of any centralized entities. This approach ensures that users receive consistent and transparent pricing, devoid of manipulation by external parties. Finally, it completely removes the need for bridges and wrapped assets.

At its core, THORChain is driven by state machines, which are used to manage asset exchange logic and coordinate external transactions. These state machines ensure that the platform can synchronize its internal state with other chains, enabling a seamless flow of assets across different blockchain ecosystems. This synchronization is achieved through one-way state pegs, which allow THORChain to accurately reflect the status of assets on connected blockchains in real time.



RUNE Token and Protocol Security

The RUNE token and its utility are at the heart of THORChain's entire economic security model. Specifically, THORChain incentivizes the locking of RUNE at a rate 3x the value of non-RUNE assets within the ecosystem.

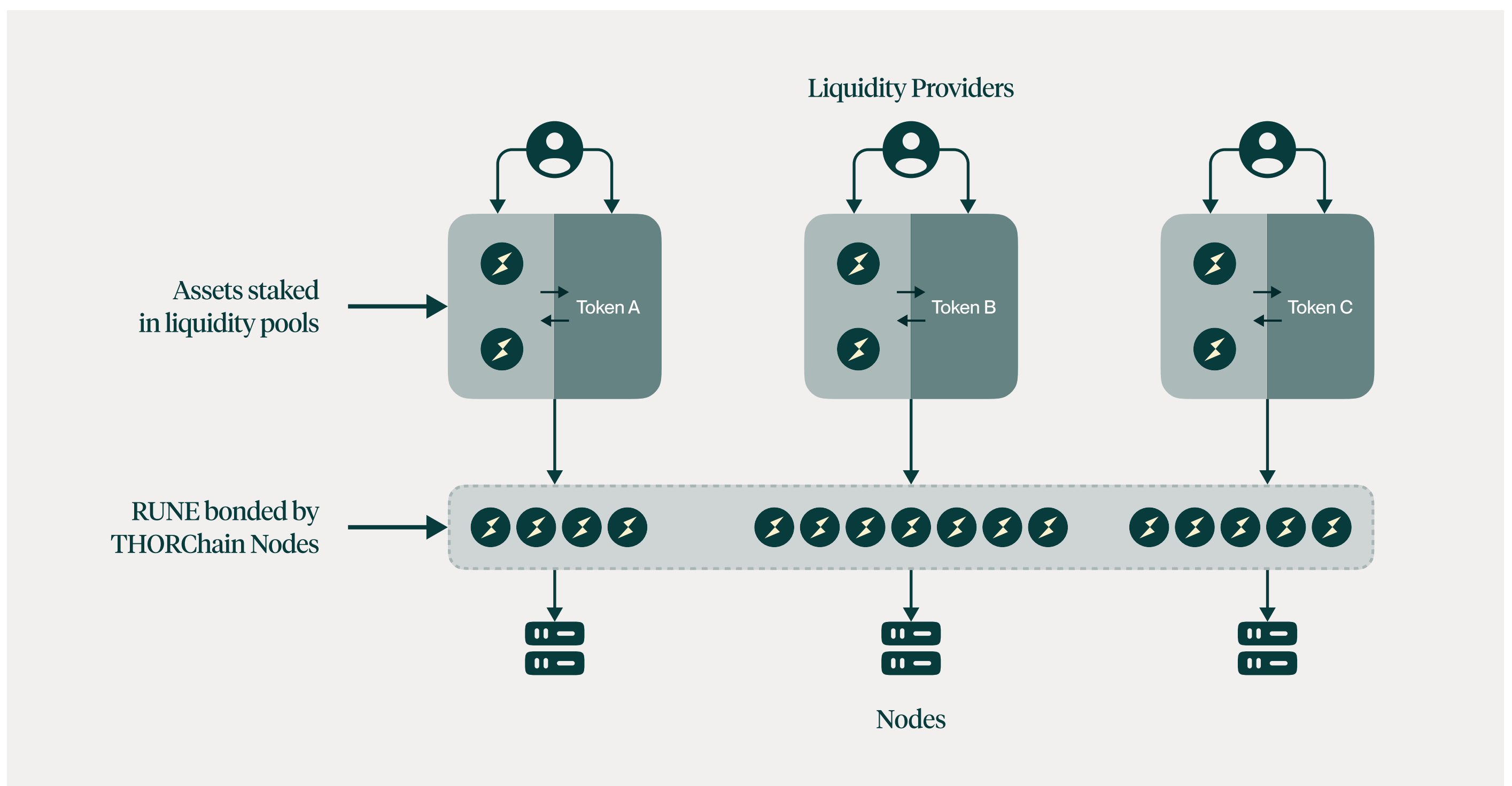


To maintain the network's security and incentivize sufficient liquidity, THORChain utilizes a dual incentive mechanism. Participants lock three dollars of RUNE for every dollar of non-RUNE assets on the platform. This 3:1 ratio establishes a foundational value for RUNE, underpinning the token's economic model. Such a structure not only promotes a high degree of liquidity but also plays a crucial role in securing the assets on the network. Through this innovative economic design, THORChain not only addresses common challenges in the DeFi space, such as liquidity fragmentation and security vulnerabilities, but also provides a compelling value proposition for both investors and users within the cryptocurrency ecosystem.

CLPs and Key Entities

Central to THORChain's operational model is the utilization of a continuous liquidity pool (CLP), with RUNE serving as the intermediary asset in every transaction. This innovative approach ensures that when users wish to exchange two different assets, the swap is conducted through two distinct liquidity pools. For instance, converting USDT to BTC involves an initial swap from USDT to RUNE, followed by a subsequent exchange from RUNE to BTC. This process is streamlined by the THORChain state machine, which handles asset conversion seamlessly with no need for users to interact directly with RUNE.

The liquidity model employed by THORChain adapts to the changing demands for liquidity. This is further augmented by the different actors within the THORChain ecosystem, which include liquidity providers, traders, and node operators. Each plays a critical part in ensuring the network's efficiency and reliability. Liquidity providers contribute assets to the pools, earning rewards in the form of block rewards and transaction fees, which are determined by their share in the pool and the pool's overall activity.



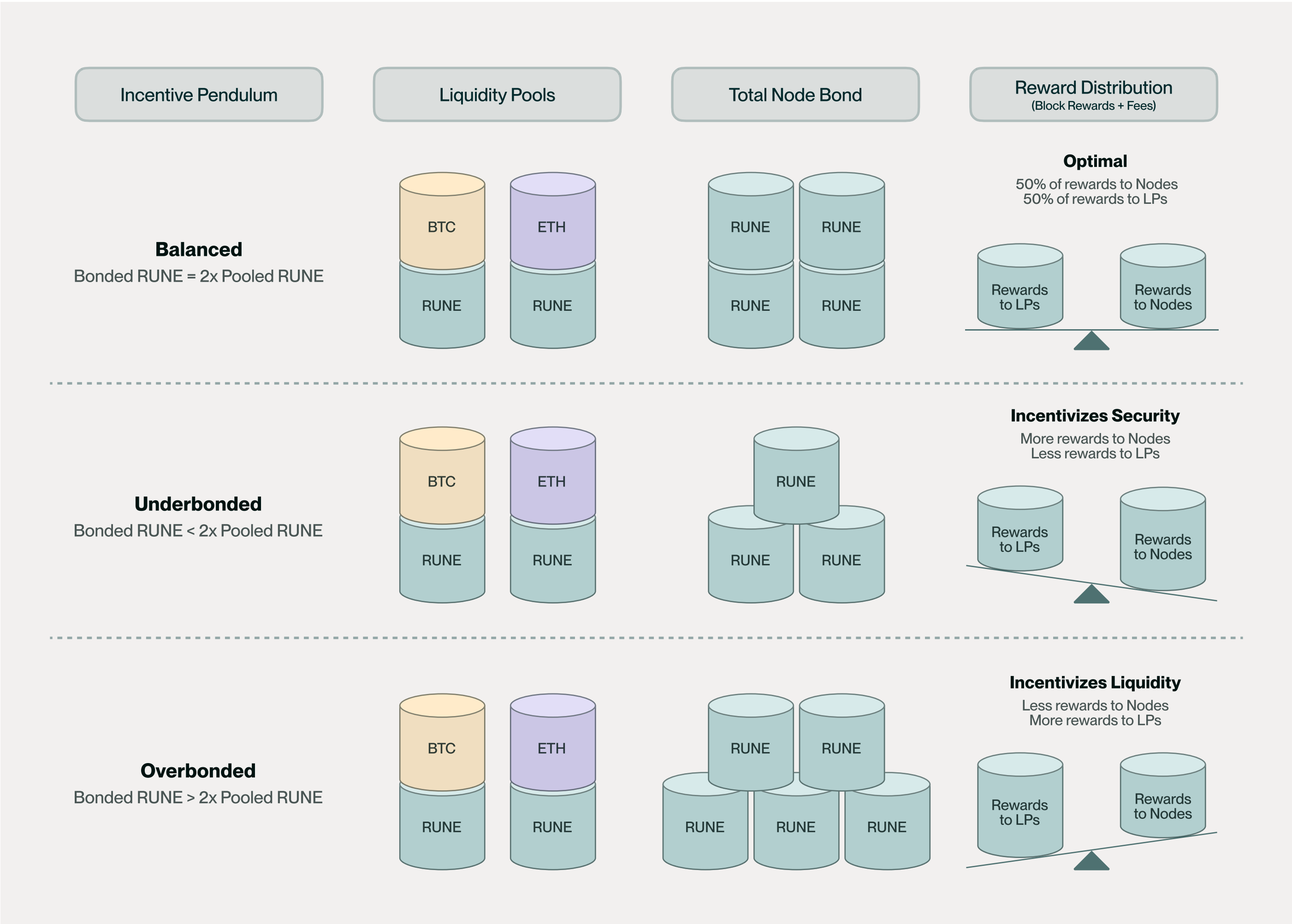
THORChain prioritizes the interests of liquidity providers, treating them as essential participants within its ecosystem and taking significant measures to safeguard their capital. In contrast, node operators are viewed differently; while they are compensated for their services, they are also subject to removal should they fail to adhere to the platform's standards.

Swappers form the user base that engages in asset exchanges, while traders leverage arbitrage opportunities to align the prices within THORChain's pools with those in the broader market, thereby maintaining equilibrium. Node operators, on the other hand, bond RUNE to support the network's security and consensus mechanism, operating under a veil of anonymity and subject to rotation to ensure network integrity.

Economic Security Model

THORChain's approach to maintaining economic security within its ecosystem is both innovative and intricate, leveraging a balance between liquidity provision and the securing of assets through a mechanism known as the Incentive Pendulum. This model is designed to ensure that the value secured by nodes, through bonding, is always proportionate to the value held within the network's liquidity pools. The architecture of this system embeds a hard cap within the THORChain codebase, effectively pausing new deposits into the pools once a certain threshold is reached, thereby preventing an imbalance that could jeopardize the network's security and efficiency.

The Incentive Pendulum plays a pivotal role in this economic security model by dynamically adjusting the distribution of block rewards and transaction fees between those who bond (the bonders) and the liquidity pools. This adjustment mechanism is crucial for maintaining a delicate balance: when the total value in the pools exceeds the value bonded by nodes, the pendulum swings to favor the bonders, resulting in increased rewards. This incentivizes bonders to commit more RUNE to their bonds, thereby enhancing the network's overall security posture. Conversely, if the value bonded surpasses the value in the pools, the pendulum shifts to favor liquidity providers, encouraging more deposits to rebalance the system.



For THORChain to function optimally, the ideal state is one where the value of bonded capital is equal to the value within liquidity pools, maintaining a 67-33 balance between RUNE bonding and pooling. This balance is predicated on the composition of liquidity pools, where half of the value is in RUNE and the other half in external assets.

The effectiveness of THORChain's economic security model hinges on the assumption that market participants will respond rationally to these incentives. However, the reality is that the barriers to entry for node operation—both in terms of technical expertise and the financial requirements for bonding—mean that this activity may be confined to a relatively small, tech-savvy, and financially robust segment of the market. This limitation could potentially slow the growth of bonded capital despite the incentives designed to encourage it.



Valour RUNE SEK

Valour THORChain (RUNE) SEK is an exchange-traded product (ETP) tracking RUNE, the native token of the THORChain protocol. THORChain is a decentralized liquidity network that enables cross-chain swaps, allowing users to trade assets directly between blockchains without the need for centralized exchanges. The RUNE token powers the network by securing liquidity pools, enabling swaps, and participating in governance. RUNE holders can stake tokens to earn rewards and influence protocol decisions. By simplifying asset swaps and maintaining decentralized liquidity, THORChain enhances flexibility and accessibility across the decentralized finance (DeFi) ecosystem.

Conclusion

As the crypto ecosystem strides towards greater complexity and connectivity, THORChain's contribution to enhancing cross-chain interoperability cannot be overstated. By removing the pitfalls associated with CEXs and traditional blockchain bridges, THORChain presents a robust, decentralized solution for the seamless exchange of native assets across various chains. Its unique economic model, leveraging the RUNE token to incentivize liquidity and secure the network, along with sophisticated security protocols like the Threshold Signature Scheme (TSS), positions THORChain as a pivotal player in the DeFi landscape. As the protocol continues to evolve and expand its reach across various blockchain networks, its innovative approach to cross-chain swaps and liquidity provision sets a new standard for decentralized exchanges, promising a more interconnected and efficient future for the crypto economy.

Disclaimer

This document complements any other disclaimer published by Valour on its website. Please carefully read it in addition to the Disclaimer, Privacy Policy and Terms of Use published by Valour at www.valour.com

This document does not constitute an offer to sell, a solicitation of an offer to buy, or a recommendation to purchase securities issued by Valour.

The information contained herein should not be relied upon as the basis for any investment decision or commitment in any jurisdiction. This document does not provide investment advice, and investors should seek independent professional guidance before making any investment decisions.

The distribution of this document and the information herein may be restricted by law in certain jurisdictions. This document does not constitute an offer to sell securities in Switzerland, the European Economic Area, the United States, Canada, the United Kingdom, Australia or Japan.

This document serves as an advertisement within the meaning of the Swiss Financial Services Act (FinSA) and does not constitute a prospectus. Within the European Economic Area, this communication is directed solely at qualified investors.

The securities issued by Valour have not been and will not be registered under the U.S. Securities Act of 1933, as amended (the "Securities Act"). These securities may not be offered or sold in the United States without registration or an applicable exemption from the Securities Act's registration requirements. No public offering of these securities will take place in the United States.

In the United Kingdom, this document is only intended for distribution to and use by: (i) investment professionals as defined in Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (the "Order"); (ii) high net worth entities and other persons to whom it may lawfully be communicated under Article 49(2)(a) to (d) of the Order; or (iii) persons to whom it may otherwise be lawfully distributed under circumstances where section 21(1) of the Financial Services and Markets Act 2000 does not apply.

Valour provides the following important information and warnings, regarding the Valour website and reports published by Valour:

1. No investment Advice: Valour is not an investment advisor and does not recommend or endorse any specific investment products or strategies. Investors should not rely on information from this website or report when making investment decisions.
2. Risk Consideration: Prospective investors should carefully review the risks associated with any investment product, as detailed in the offering memorandum or similar documents provided by the issuer.
3. Tax Implications: Valour is not a tax advisor. Consult a qualified tax professional to understand the tax consequences of any investment decision.
4. Index Inclusion: The inclusion of an asset in an index does not constitute a recommendation to buy, sell, or hold that asset.
5. Information Purpose: Website materials are for informational purposes only, based on publicly available information from sources believed to be reliable.
6. Content Usage: The content on this website may not be modified, reproduced, or distributed without prior written permission from Valour.
7. Disclaimer of Warranties: Valour provides the content "as is" without any warranties of accuracy, completeness, timeliness, or fitness for a particular purpose.
8. Limitation of Liability: Valour is not liable for any damages resulting from the use of the content, including but not limited to direct, indirect, incidental, or consequential damages.
9. Investment Risks: Investments in cryptocurrencies and digital assets carry high risks, including the potential for total loss. Prices may vary across trading platforms, and investments may become illiquid.
10. Due Diligence: Investors should do their own research and carefully review all risk factors disclosed by relevant trading platforms, or in product documents, or otherwise before making any investment decisions.