KALATA

Synthetic Asset Derivatives Trading Platform

Brief

KALATA is the backbone of Synthetic Asset issuance and transaction agreements, allowing everyone to have a smooth experience of real world financial assets. Kalata will be built on Binance Smart Chain with higher performance, lower transaction costs and a higher degree of customization. KALATA is also a derivative trading and mortgage lending platform for decentralized synthetic assets. KALA is the native token of the system, which is designed to promote community governance and stimulate the activity of KALATA ecosystem.

1 Background

1.1 Witness the Future

2020 is quite a different year. Global service industry has suffered because of raging pandemic. Confronted with this situation, governments and banks apply unprecedented fiscal stimulus and quantitative easing policy. Loose monetary policy has increased the supply of money in the market. In the history, there has never been such a large amount of money being poured into the market. The subsequent impact on the financial market will be difficult to estimate.

From the creation of Bitcoin by Satoshi Nakamoto in 2008, to the explosion of deFi in 2020, we witnessed the trend that blockchain is devouring current financial world, and various open networks running on the blockchain have been born. In 2020 alone, we saw that with a lot of advantages including low threshold costs and censorship resistance nature, products that have been developed for hundreds of years in the traditional finance world are rapidly beginning to be practiced with blockchain, ranging from lending agreement to the synthetic asset agreement, as well as the derivative leverage agreement. Fundamental tools required by the traditional financial system have emerged one after another in decentralized financial markets.

1.2 Huge Market

According to statistics, the market size of unmet financial needs globally has reached 5.2 trillion USD, compared with current deFi market which has only reached the scale of tens of billions of USD. Moreover, traditional finance has disadvatanges of being subject to geographical barriers, high transaction costs and liquidity restrictions, making it difficult for most ordinary people to invest freely in traditional markets, which, as a result, provides enormous oppurtunities for deFi markets.

Synthetic assets will be able to provide a larger market relative to native cyptocurrency assets. In the meantime, synthetic assets can be easily accepted by a number of users from fields of traditional finance with some knowledge of financial instruments. With the development of deFi, the assets that can be synthesized will continue increasing, and the track will usher in even more amazing growth.

2 Synthetic Asset Agreement

2.1 Realization of Synthetic Assets

Due to the geographical barriers, high transaction costs and poor liquidity of traditional assets, there is a high threshold for ordinary people to hold these assets. Kalata converts financial products into digital assets, and through this way, users can gain the equity of assets without obtaining them. The purpose of currency is used to measure the value of assets. Synthetic asset tokens can give you the opportunity to benefit from changes in the value of assets without actually holding them.

The value of the assets synthesized by Kalata needs to be obtained off-chain and then submitted on-chain. Through external services such as oracles, the value changes of synthetic assets can be monitored. Kalata synthetic protocol allows anyone to mint synthetic asset tokens by locking in collateral. Currently, the agreement stipulates that the required collateral is at least 1.5 times of the value of the synthetic asset. The minted synthetic asset token is based on blockchain network, where everyone can verify the ownership which cannot be forged or revoked.

Users can flexibly hold the risk exposure of the subject matter by holding synthetic asset tokens, thereby obtaining possible opportunities to profit.

2.2 Liquidity and Incentives

There is no fee for holding synthetic asset tokens. Anyone can view their tokens through blockchain network without providing identity information. A traditional exchange will match both parties to complete the transaction through the order book. In contrast, through the decentralized exchange with the AMM mechanism, tokens in the pool are traded based on a constant product method. We do not need a counterparty in the transaction that can be automatically executed.

For providers of synthetic asset trading liquidity, providing liquidity can earn transaction fees paid by traders. This method is called liquidity mining. Users who trade through AMM can trade without KYC, and this way of trading can ensure that the user's assets are always stored in their wallets, while transactions are achieved through the interaction of smart contracts, without the need of centralized trading platforms. This mechanism also provides a new way of profiting for users who hold synthetic asset tokens.

The operation of Kalata is guaranteed by incentivizing users who mint and provide synthetic liquidity with KALA tokens. In addition, KALA is a system governance token whose holders can vote to improve the system.

2.3 Destruction and Liquidation

When minters want to withdraw pledges, they must pay the corresponding amount of synthetic asset tokens. The Kalata protocol determines the amount of collateral required for minting assets by docking with an external high-performance oracle and assesses whether the current value of collateral is sufficient to pay the value of synthetic asset tokens. When the collateral value reaches the minimum value preset by the system, the system will execute liquidation to ensure the value of synthetic asset tokens.

When the collateral ratio falls below the minimum value preset by the system, Kalata introduces an auction mechanism to avoid liquidation risks in extreme cases. Users who hold KALA can auction at a discounted price to anyone who is willing to sell synthetic asset tokens as a transaction. this process proceeds recursively until the mortgage rate reaches the preset value for liquidation.

In order to ensure that the price of synthetic asset is the same as actual asset price, the system uses oracles to keep the stability of synthetic asset value. When the price of the synthetic asset token is greater than the price of the oracle, will incentivize users to mint synthetic assets, while users who want to destroy synthetic assets need to pay the agreement fee; when the price is lower than oracle, the system will exempt the agreement usage fee, and incentivize a certain amount of KALA tokens.

3 Derivatives Trading Platform

3.1 Synthetic Derivatives

In traditional finance, in order to reduce risks, traders usually hold a series of derivatives to minimize risks when holding financial positions. Derivatives traders can adopt a P2P trading model in Kalata. Liquidity is concentrated in the mortgage pool, and everyone interacts with the mortgage pool directly, thus providing zero slippage and unlimited liquidity for derivatives, and the risk is shared by the mortgagor group together at the same time.

In other words, Kalata Exchange is a decentralized derivative trading platform with zero slippage and unlimited liquidity, while the platform only supports USDk transactions. Users who mortgage KALA can mint USDk, and the value of USDk is provided by the mortgage pool. When users mortgage, they obtain debt at the same time. Since the mortgage pool bears the risk of losses on the exchange platform, when the net position of users increases, the value of all mortgagors' debts increases proportionally. When the mortgage pool profits, the debt ratio will decrease. Users who hold synthetic asset tokens can also hedge risks directly through the Kalata Exchange. The price of derivatives does not need to be provided by oracles, while can be determined by the proportion of assets in the decentralized trading pool.

3.2 Debt Mortgage Rate

When users mortgage KALA into KALA system to mint synthetic derivatives, they obtain a debt denominated in USDk. The system encourages users to mortgage more tokens with incentives, to ensure the the synthetic assets have sufficient collateral to support large fluctuations in prices. The mortgager can obtain USDk through Kalata Exchange to supply or adjust the pledge rate.

When users mint or destroy synthetic derivates in Kalata system, the system will update the "cumulative debt incremental ratio" to track the debt pool and the debt of each mortgagor. Users can calculate the proportion of KALA mortgagor's debt in the debt pool when it was last minted or destroyed, as well as the change in debt caused by other mortgagors entering or leaving the system. The system will determine the debt of each mortgagor at any future point of time, without actually recording the change of the debt of each mortgagor. By updating the "cumulative debt incremental ratio" on a "debt register", the system can track the debt ratio of each user. If a mortgagor destroys all debts, her debt issuance data in the debt register will be set to 0 and the mortgagor will no longer be in debt.

3.3 Destruction and Liquidation

When the mortgagor wants to exit from the system or reduce the debt to unlock the mortgaged KALA, the debt must be repaid first. Since the debt is changing dynamically during the mortgage period, the debt may need to be destroyed more or less than its value at the time of minting.

If the mortgage rate drops to the lower bound set by the system, the mortgagor will not be able to receive transaction fee rewards. At the same time, in order to avoid systematic risks, we have also introduced a clearing mechanism. When the mortgage rate of a mortgagor is lower than 250%, the system will prompt the risk of liquidation. If the mortgage rate has not been increased for a period of time, the collateral will be liquidated. The "deposit liveness period" is introduced here: The mortgagor can add collateral during an active period (4 hours) to avoid liquidation. After the active period, if the mortgage rate is still less than 250%, any holder can initiate liquidation of the collateral at this time. After the liquidation is successful, the liquidator can obtain a certain amount of income from it.

3.4 Income Distribution

In Kalata Exchange transactions, a 0.03% fee is charged per transaction and the fee enters the mortgage pool and serves as a reward for the mortgagor. The mortgagor can receive the KALA reward once a week, which is derived from the income of the Kalata system. The amount of the rewards is distributed according to the ratio of any mortgagor's shares to the total debt pool. Users who conduct derivatives transactions can also get rewards of KALA tokens based on the proportion of the transaction amount to the total transaction volume.

3.5 Future Plans

More assets will be added to the system in the future, including leveraged assets that are not available on other platforms such as fund indexes, stocks and commodities.

Synthetic futures: By obtaining asset prices in the decentralized exchange, synthetic futures can be available at Kalata Exchange, which will enable users to hedge risks fully through the Kalata platform.

Leveraged trading: Leveraged trading has always been one of the core needs in the financial sector. The leveraged trading module of Kalata Exchange will

provide users with a decentralized and user-friendly trading experience by synthesizing users' assets into tokens of leveraged assets and liability assets.

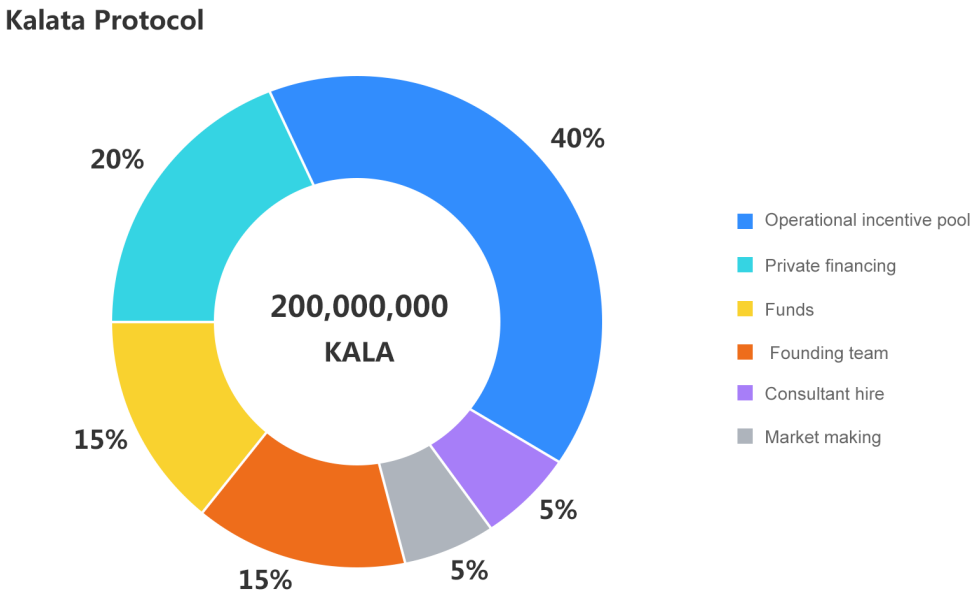
4 KALA Tokens

The Kalata Protocol token is named KALA. KALA is based on BEP-20 standard with a total issuance of 200 million. The token will be used for multiple purposes in the following proportions.

For founding teams and private financing, 20% of total tokens are used for early investors and private equity financing, among which 20% will be released right after the token can be publicly traded, the remaining 80% will be linearly released within 12 months; 15% of total belong to founding teams, this part of tokens will be released three months after the tokens can be publicly traded, and will be linearly released within the following 12 months.

For foundation and consultant, 15% of total are reserved by the foundation for purposes of future ecological development for the community and business operations; 5% of total are used for hiring consultants.

For operational incentives and market making, 5% of total are used for market making to increase liquidity of KALA; 40% of total are used to motivate users to participate in synthetic asset minting, the tokens in the pool will be used to motivate the users to mint synthetic asset tokens to maintain sufficient liquidity as well as to anchor prices.



Future purposes of KALA tokens

5 Development Plans

2021-Q2 Kalata V1 will be launched on BSC network, allowing users to mortgage and mint synthetic U.S. stocks

2021-Q3 With the help of high-performance oracle, on-chain asset synthesis for bulk commodities will be realized

2021-Q4 Kalata Exchange will be launched, supporting derivatives trading with synthetic assets

2022-Q1-Q2 Continued development of synthetic asset (derivatives) futures and leverage trading will be built on NEAR network

2022-Q3-Q4 Kalata system will transform to DAO governance model