NFTMart-Token Economics Whitepaper

1.Overview

NFTmart is committed to becoming the world's most professional NFT decentralized trading market. It is divided into two parts. The first part nftmart.network is an open and decentralized NFT public chain, which is mainly used for the issuance of NFT products and transaction data on the chain. The second part provides friendly transaction scenarios for the nftmart.io website. For users to upload or trade NFT conveniently and quickly.

NFTmart is a development based on a substrate architecture, which is naturally combined with Polkadot's cross-chain ecology. The entire network cross-chain model will bring unlimited possibilities for NFT trading.

Due to NFTmart's decentralized nature, after his growth period, he will eventually transfer to community autonomy.

2. Economic design goals

The NFTmart economic model needs to seek a balance between protecting the interests of all participants and the sound development of the system. And it needs to be considered that economic models can eventually lead the ecosystem to community autonomy smoothly. It is necessary to ensure that the self-interests of all participants are consistent with the ultimate goal of the system and promote each other. At the same time, all participants can also supervise and restrict each other to ensure the safety and stability of the entire ecosystem.

In order to achieve our design goals, we think from several aspects:

(1) How to ensure the safety of NFTmart.

(2) How to maintain the sustainable development of NFTmart.

(3) How to protect the interests of participants.

(4) How to ensure that the interests of the participants are consistent with NFTmart's development direction.

On the basis of investigating the economic models of various blockchain projects, NFTmart decided according to its own project characteristics: choose the Polkadot NPOS consensus mechanism at the basic layer of the blockchain, referring to the Polkadot ecological economic model and asset system.

3.Token

The native token on the NFTmart network NMT is a functional token that realizes the value of the entire network, similar to ETH in the Ethereum network or DOT in the Polkadot network.

3.1 Token function

In NFTmart network, NMT token mainly has the following functions:

(1) Used for staking, maintaining the NPOS consensus of the NFTmart network, and ensuring the safe operation of the network.
(2) Used to provide guarantee for selected nodes.
(3) Used to create and use NFT.
(4) Used to purchase various services in the ecology.
(5) Used to pay network transaction fees (Gas).
(6) Various elections and voting for on-chain governance mechanisms.

The blockchain consensus of the NFTmart network refers to Polkadot and adopts the NPOS (Nominated Proof of Stake) consensus mechanism. The nominee pledges NMT to participate in the election of reliable validators. The validator is responsible for packaging and validating blocks and ensuring finality. Both the validator and the nominator will receive a reward proportional to their respective equity, and the validator can set the sharing method.

NFTmart is a trading platform. Users need to pay or pledge NMT for products and guarantee products. At the same time, various service fees in the ecology can also be paid using NMT tokens.

Similar to other blockchain projects, the transaction fee for using the NFTmart network is also paid by NMT.

NFTmart will eventually turn to community autonomy, and the entire NFTmart governance will use NMT tokens for on-chain parliamentary elections and voting, and proposals for voting.

3.2 Generation and destruction of tokens

There are two ways to generate NMT tokens: (1) One-time generation after the main network is launched; (2) Additional issuance incentives to miners following the production of blocks.

The number of tokens generated when the NMT mainnet is launched is: 100,000,000 NMT, and the distribution method is as follows:

(1) 40,000,000 (40%) is used for mining, and users are encouraged to use and promote
(2) 15,000,000 (15%) to give initial team rewards
(3) 17,000,000 (17%) Early fundraising
(4) 6,000,000 (6%) Advisors
(5) 3,000,000 (3%) Liquidty Provision
(6) 19,000,000(19%) Ecosystem

As block production NFTmart will issue additional NMT through inflation, 90% of the additional issue of NMT will be mainly rewarded to the nodes participating in the network to maintain the security and stability of the network protocol. The remaining 10% will be put into the national treasury.

The inflation rate of the NMT certificate is related to the entire network mortgage rate. For the specific algorithm, please refer to the introduction of the consensus mechanism at the end of the article.

If the service quality of the node is unstable or is found to be malicious, it may face the penalty of NMT token and it will be put into the national treasury as a reserve.

The basic fee in the transaction fee will be destroyed directly, the remaining 90% will be used as a block reward and paid to the validator node of the packaged block, and the remaining 10% will be put into the mining fund pool for mining

The reserve NMT in the national treasury will be destroyed at a rate of 1% every 18 days. At the same time, the NMT must be mortgaged to initiate a funding proposal to the State Treasury. If the proposal fails, the mortgaged NMT will also be destroyed.

3.3 The value of the token

NMT is the function token of NFTmart network, and its value depends on the development of NFTmart network and ecology. Its value is positively related to the scale of the NFTmart network. When NFTmart is used by more people, organizations, and institutions, the demand for NMT will increase accordingly.

There are two main ways in which NMT tokens capture network value: (1) When users lock or occupy the network to reduce the total circulation. For example, the staking of the consensus mechanism and the pledge of tokens for application services on the chain; (2) Various destruction scenarios reduce the total amount of tokens, such as transaction fees and NMT reserves in the treasury.

4.Participating role

In the NFTmart ecosystem, there will be multiple parties. They have different needs. According to the way each role participates, we divide them into: validators, nominators, merchants, and sales. The first two are the basic guarantee for the operation of the blockchain, and the latter two are important participants in the NFTmart ecosystem. Each person participating in the NFTmart ecosystem may play multiple roles at the same time.

4.1 Validator

The validator is responsible for the nodes that package and generate blocks in NFTmart, and maintain the operation of the entire blockchain network. Like Polkadot's validators, validators need to pledge NMT tokens and need to stay online continuously. The validator nodes participating in the network can obtain separate package rewards and the reward sharing of each cycle of the blockchain, but they also need to bear the risk of being fined and confiscated.

4.2 Nominator

The nominator is an account that provides guarantees for any one or more nodes in the NFTmart network. An account with an NMT pass can become a guarantor, and the guarantor provides a guarantee for the stability and integrity of the node's service with the NMT held by the guarantor. The guarantor can share rewards with the guaranteed nodes (the specific ratio is determined by each node). If the node is punished, the guarantor will also bear the penalty according to the proportion of the guarantee.

4.3 Merchant

Merchants are the core users of NFTmart, and they provide product mobility. In addition to the GAS fee, other costs will be incurred during product listing and product management. Merchants can also pay NMT to purchase ecological third-party services (such as storage, display rankings, etc.).

4.4 Sales

Sales personnel are in the role of intermediary, matching business and customer transactions. Sales staff can obtain corresponding funds during the sales process. To become a seller, you must mortgage a certain amount of NMT

5.Capital pool

5.1 Treasury

NFTmart's treasury mainly serves NFTmart's safe and stable operation and ecological development. Anyone can initiate a proposal by collateralizing NMT and apply for state treasury funds. The collateral required to initiate a proposal is 4% of the funds applied for appropriation or 100 NMT (whichever is higher). If the proposal is passed, the pledged NMT will be returned in full, if not passed, the pledged NMT will be destroyed.

There are three sources of funds for the treasury:

(1) Additional issuance: 10% of the reward tokens generated with the block will be put into the national treasury;

(2) Fines and confiscated income: the service quality of the verification node is unstable or malicious, and the fined NMT will be transferred to the national treasury;

5.2 Mining funds

In order to encourage users to use NFTmart, the system will define some growth behaviors that are beneficial to the ecology, and reward users for these behaviors. This part is called behavior mining.

There are three sources of initial funding for mining:

(1) 50 000 000 NMT generated at startup;

(2) The part of transaction fee;

(3) It can be supplemented by initiating treasury appropriation proposals;

6.Economic model

The main problem that NFTmart's economic model solves is to reasonably distribute the interests of each participant under the premise of ensuring the security of the network protocol. The economic model can encourage all participants to join the network while also making the system stronger and more secure

6.1 Consensus

NFTmart's consensus will adopt the same NPOS consensus as Polkadot. The validator runs the node to participate in the production and confirmation of the block, and the nominator (Nominator) can pledge his tokens to obtain the right to nominate, and nominate the validators he trusts to share the reward.

NPOS rewards mainly come from the issuance of tokens, which is also a source of inflation.

6.1.1 Inflation model

In order to ensure the balance between safe block production and sufficient market supply, NFTmart hopes that 60% of NMT will be mortgaged into the NPOS consensus system. NFTmart expects an annual inflation rate of 10%. With a mortgage rate of 60%, the average annualized rate of return of mortgage tokens is 16.5%.

The above parameters are not achieved through hard and fast regulations, but through algorithm models:

(1) When the mortgage rate is less than 60%, and the average mortgage rate of return is> 16.5%, encourage more token mortgages;

(2) When mortgage rate = 60%, mortgage average annualized rate of return = 16.5%;

(3) When the mortgage rate is> 60%, the average annualized rate of return on mortgage is <16.5%, and redemption is encouraged but not mortgaged.

6.1.2 Inflation rate and earnings formula

Concept definition

$$StakingRate: X = \frac{NMT_{TotalStaking}}{NMT_{TotalSupply}}$$

$$AnnualInflationRate: R = \frac{(NMT_{YearEndSupply} - NMT_{YearStartSupply})}{NMT_{YearStartSupply}}$$

$$ExpectedStakingRate: x_{ideal} = 0.6$$

$$ExpectedAnnualizedRateOfReturn: i_{ideal} = 0.165$$

$$InflationRateWhenStakingIs0: I_0 = 0.025$$

$$GreaterThanExpectedAttenuation: d = 0.04$$

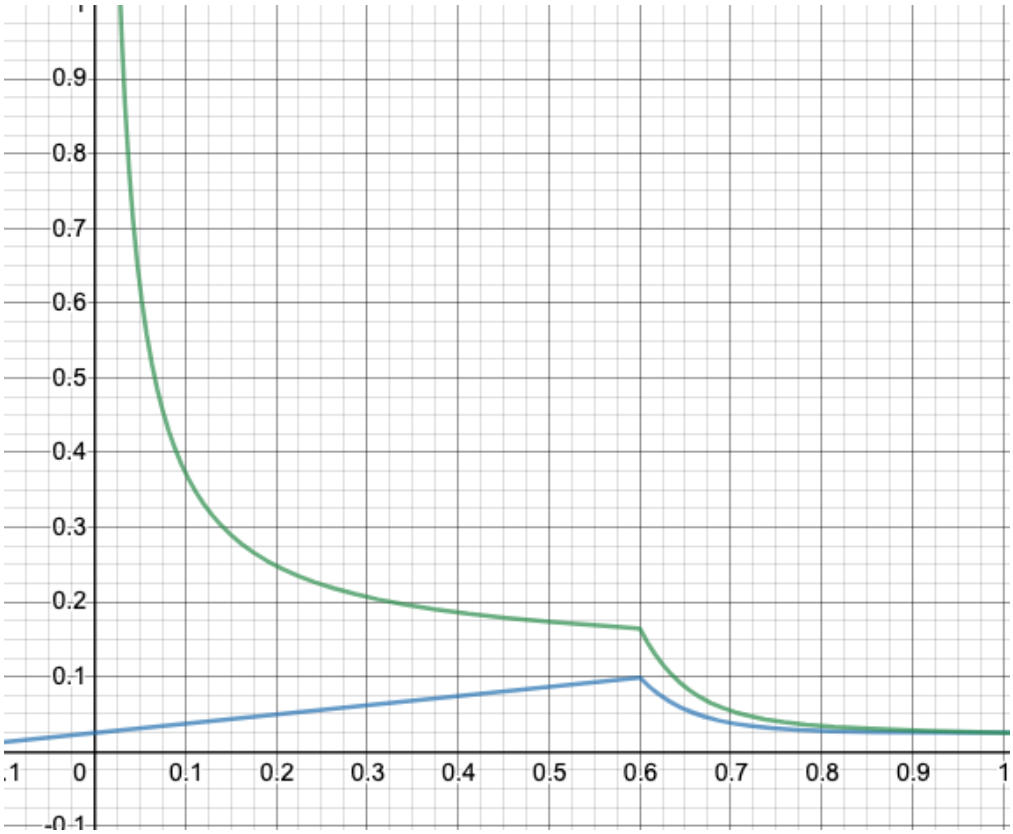
$$InflationRateCalculationFormula: I_{npos}(x)$$

$$for \rightarrow 0 < x \leq x_{ideal} \qquad I_0 + x(i_{ideal} - \frac{I_0}{i_{ideal}})$$

$$for \rightarrow x_{ideal} < x \leq 1 \qquad I_0 + (i_{ideal} * x_{ideal} - I_0) * 2^{\frac{(x_{ideal} - x)}{d}}$$

$$YieldFormula: i(x) = \frac{I_{npos}(x)}{x}$$

Inflation and yield curve



6.1.3 Distribution of additional issuance

Every time a block is produced on the NFTmart network, the system will issue a certain amount of NMT. Since the inflation rate is not a fixed value, it is related to the actual mortgage rate of the entire network, so the additional NMT is also floating. Additional NMT will be distributed according to the following rules:

(1) 90% as a block reward, distributed to the validator who produced the block and the nominator who nominated the validator;

(2) 10% goes to the national treasury to support the development of NFTmart network and ecology;

The validators of the NFTmart network have equal opportunities to produce blocks, and the rewards for producing blocks follow the same algorithm, regardless of the mortgage ratio.

Part of the block reward is used to pay the validator's commission (the ratio is set by the validator), and the remaining part will be paid to the nominator (including the validator himself) according to the mortgage ratio, that is, the validator's reward has two parts, one part It's the commission, and the other part is the reward that you nominate and pledge yourself.

6.1.4 slash

If the validator acts improperly on the network (for example, offline, not complying with the consensus protocol, etc.), he will be punished. His nominee will also lose the mortgaged NMT in proportion to the mortgage and remove the validator status.

Once the penalty occurs, validators with more mortgages will be punished more than validators with less mortgages. Therefore, we encourage nominators to transfer their nomination to validators who have received fewer votes but are honest and

reliable, thereby reducing potential losses. It also makes the entire network more secure and decentralized.

The confiscated assets will enter the state treasury. Within a certain period of time, the validator can initiate an appeal. If the appeal is passed, the confiscated assets can be returned.

6.2 Transaction Fees

When using NFTmart network, users need to pay transaction fees whether they initiate a transfer or call related interfaces of the trading market.

The transaction fee calculation formula is as follows:

Total cost = basic cost + (byte fee + weight fee) × (1 + dynamically adjusted fee rate) + consumption

among them:

Basic fees: The fees that must be paid for each transaction;

Byte fee is the fee calculated based on the requested byte, byte fee = cost per byte × number of bytes;

Weighting fees are fees based on the difficulty of the requested transaction;

Dynamic adjustment fee rate The fee rate adjusted according to the proportion of block resource usage. When the network usage rate is low, the transaction fee is reduced, and when the network usage rate is high, the transaction fee is added;

Consumption consumption is a fee determined by the sender of the transaction, which can increase the priority of packaging;

The basic fee in the transaction fee will be directly destroyed, the remaining 90% will be used as a block reward and paid to the validator node of the packaged block, and the remaining 10% will be put into the mining fund pool for mining.

Appendix description

1. All the fixed parameter values in the article, unless there are logical restrictions, will be made to be modified by voting on the chain governance;
2. All time-related parameters in the text are just for the convenience of understanding and reading. In actual use, it will be converted into the number of blocks according to the block time;
3. The economic model will continue to iterate, and part of the content may be constantly revised and adjusted;
4. This economic white paper has reference to the Polkadot economic white paper and other literature materials, thank you;