NobiIndexe

A Customizable Indexing Protocol for Nobidex

AlgoRock – Ali.S Rahnama - October 2023

NobiIndexe is a decentralized protocol that allows users to create customizable cryptocurrency indexes and invest in them through index tokens. Users can choose the constituents, weighting scheme, rebalancing frequency, and other parameters when creating an index.

The indexes will be integrated across the Nobitex ecosystem. Index tokens can be traded on the Nobidex decentralized exchange, stored in Laket wallet, and potentially used as collateral for lending on Nobitex products.

Indexes can include constituents from all assets listed on Nobidex such as top tokens by market cap, DeFi, NFT, gaming, L1s, L2s etc. Weighting schemes could be equal, by market cap, recent performance and more. Rebalancing can be configured for any frequency.

The NobiIndex protocol will have a native token, NBI. NBI will be used to pay fees for creating and managing indexes. NBI holders can stake to earn a portion of these fees and govern parameters of the protocol.

By allowing customizable indexing and seamless integration with Nobitex products, NobiIndex will attract liquidity and increase utility for the ecosystem. Users can gain broad market exposure or target specific niches. The additional DeFi functionality like staking and governance aims to create a sustainable, community-driven project.

This indexes-as-a-service model powered by an incentive-aligned native token can drive significant adoption and value for Nobitex and its users. We propose building and launching NobiIndex as a flagship DeFi offering for the Nobitex ecosystem.

Technical Architecture

The NobiIndex protocol will allow the creation of customizable on-chain index funds using smart contracts. Users can create an index by depositing tokens into a smart contract and defining configuration parameters like:

- Constituents - List of tokens to include in the index
- Weighting scheme - Market cap weighted, equal weighted, etc.
- Rebalancing frequency - How often the index is rebalanced to target weights
- Fees - Creation fee, rebalancing fee, management fee

The smart contract will mint ERC-20 index tokens representing a claim on the contents of the index fund. Assets will be priced using Nobidex on-chain oracle feeds.

Rebalancing will use a trustless mechanism without counterparties. When a rebalance is triggered, the contract will swap constituents on Nobidex using decentralized exchange functionality through liquidity pools.

NobiIndex creators can configure a management fee that accrues to them on each rebalance. Index management is decentralized as creators do not hold funds but only define parameters.

The NobiIndex token (NBI) will coordinate the protocol and align incentives. NBI facilitates:

- Index creation, rebalancing, and management
- Staking and governance of protocol parameters
- Distribution of a portion of fee revenue to stakers (Mainly in the form of buybacks and the rest in the form of real yield)

Additionally, we propose building a user-friendly front-end interface for seamless index creation, tracking, and management. Users can monitor index performance, rebalance history, and manage positions.

Integrating across the Nobitex ecosystem unlocks additional functionality for users. Index tokens can be traded on Nobidex DEX, used as collateral for lending, and more.

Tokenomics

The NobiIndex Token (NBI) will be the native utility and governance token of the protocol. NBI will have the following utility:

- Index Creation - NBI will be required to create and configure an index fund. The creation fee paid in NBI gets distributed to stakers.
- Rebalancing Fees - Each rebalance triggered by index managers will also require an NBI fee. This aligns managers with proper maintenance.
- Staking and Governance - NBI holders can stake to earn fees and vote on protocol parameters like fee levels and constituent limits.
- Discounts - Significant NBI staking may allow discounted fees for index creation and management.

We propose the following token distribution and release schedule:

- 60% to the community via liquidity mining through Nobidex DEX and other incentivization programs
- 20% to the treasury to fund development, operations, marketing
- 10% to investors through a fair launch or IDO
- 10% to founders and team members with vesting over 2 years

NBI emissions will be controlled to incentivize early adoption while maintaining an optimal circulation schedule. Fees accrued to the protocol will be used to market buy and burn NBI, creating deflationary pressure.

We believe a fixed maximum supply around 250 million tokens would be sufficient to properly incentivize the network while retaining upside price potential.

The tokenomics are structured to incentivize usage of the protocol while fairly compensating all key stakeholders. Staking and locked NBI requirements ensure proper alignment and governance mechanics.

Integrating NBI deeply within the ecosystem will catalyze rapid adoption of NobiIndex. The protocol can deliver significant value to Nobitex users while growing the utility of NBI and its deflationary feedback loop.

Smart Contract Architecture

The core smart contracts will include:

- Index Fund Contracts - Each index fund will be represented by its own contract that holds constituents, mints index tokens, and handles rebalancing.
- Oracle Contract - Aggregates price data from Nobidex and other sources to provide pricing for index funds.
- NBI Token Contract - The ERC-20 NBI utility and governance token.
- Staking Contract - To stake NBI and earn protocol fees. Includes delegation and voting.
- Treasury Contract - Manages protocol-owned NBI, fees, and monetary policy like buybacks.
- Governance Contract - Handles admin roles, parameters,deploying new indexes, fee schedules.

Index fund contracts will integrate with Nobidex oracles for pricing data. Rebalancing will swap constituents through Nobidex DEX pools using a trustless on-chain mechanism.

To optimize gas costs, index creation will use a factory contract that clones a base implementation. Rebalancing logic triggers from a universal manager contract.

Protocol fees will be sent to the treasury and distributed to NBI stakers. The treasury buys back NBI using a bonding curve for price stability.

Governance will be able to upgrade contracts through timelocked proposals. New indexes can also be deployed through governance once vetted.

We will use extensive auditing and formal verification of core contracts before launch. Sandbox environments will be utilized for rigorous testing.

This architecture ensures security, efficiency, upgradability and decentralization for the NobiIndex protocol while deeply integrating with Nobidex products.