NFTFN

Whitepaper

NFTFN is an order-book-based NFT Perpetual DEX | Traders can go Long and Short on the NFT market via indexes

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Abstract 📝

The digital world has undergone a major transformation with the rise of Non-Fungible Tokens (NFTs), unlocking a new frontier of ownership, expression, and value creation.

This market boasts a staggering $10 billion market cap (as of 2023) and is projected to reach $230 billion by 2030, presenting immense potential. Yet, many are locked out by the daunting entry barriers, complexities of buying and selling, and lack of risk management tools. This creates a frustrating experience for traders looking for a simple and safer way to participate.

NFTFN's **SuperNova (SNV)**, our first flagship product, tackles these challenges head-on, providing a cost-effective and accessible solution that empowers investors to unlock the full potential of their NFT aspirations.

By offering an NFT floor-price index, SuperNova allows traders to hedge their positions on various Blue-Chip NFT collections and participate in the market without the burden of managing individual NFTs.

Additionally, Supernova(SNV) being an index provides traders a diversified exposure to the NFT market, spreading risk across multiple NFTs and reducing the impact of underperformance or volatility in any single NFT.

This innovative solution aims to transcend the limitations of the traditional NFT market, improve liquidity, and create a more inclusive and rewarding experience for all participants.

Introduction 📖

Non-Fungible Tokens (NFTs) have emerged as a transformative force in the digital landscape, revolutionizing how we own and interact with digital assets. These unique tokens represent ownership of digital items, such as artwork, collectibles, virtual real estate, and more using blockchain technology to ensure their authenticity and scarcity.

Despite the NFT market's impressive growth, with a market cap of $10 billion in 2023 and projected to reach $230 billion by 2030, several challenges impede its full potential.

One significant barrier is the high entry cost, which often excludes average investors from accessing premium Blue-Chip NFT collections. Additionally, navigating the complexities of buying and selling NFTs on secondary markets can be daunting for newcomers, further limiting market accessibility.

Moreover, the lack of readily available hedging mechanisms leaves investors vulnerable to the market's inherent volatility, creating a sense of uncertainty and risk.

This reality poses a frustrating dilemma for traders and investors alike. Imagine witnessing your favorite NFT collection skyrocket in value, yet being unable to participate in the rally due to these barriers. Alternatively, envision the sinking feeling of watching your prized NFT lose value, knowing there are limited options to protect your investment.

These challenges underscore the need for innovative solutions that make the NFT market more inclusive and accessible.

NFTFN's SuperNova (SNV) addresses these challenges head-on, offering a cost-effective and accessible solution that empowers investors to unlock the full potential of their NFT aspirations.

SuperNova provides traders with low-cost exposure to premium NFTs such as **Bored Ape Yacht Club (BAYC)**, **Mutant Ape Yacht Club (MAYC)**, **Azuki**, **Doodles**, and **CloneX**, allowing them to hedge their positions on various Blue-Chip NFT collections without the burden of managing individual NFTs.

By offering an NFT floor-price perpetual, SuperNova not only provides traders with diversified exposure to the market but also addresses the liquidity issues in the NFT ecosystem.

NFTFN envisions a future where everyone can experience the thriving world of NFTs, not just the privileged few. NFTFN is committed to democratizing this space and empowering individuals to unlock the full potential of their NFT aspirations.

Through our first innovative flagship product, SuperNova (SNV), NFTFN aims to transcend the limitations of the traditional NFT market, offering a more inclusive and rewarding experience for all participants.

This whitepaper will delve deeper into the challenges facing the NFT market, explore the innovative solutions offered by SuperNova (SNV), and outline the exciting future NFTFN envisions for everyone.

Existing Roadblock 🚧

Investment in NFTs faces the following challenges.

👉 High Entry Barrier

The Non-Fungible Token market is a promising arena for artists and creators to monetize their talents, yet it remains exclusive. Access to high-end NFT collections is limited to large investors and wealthy collectors, as the cost of entry is too steep for most retail investors.

👉 Lack of Liquidity

Although NFTs have the potential to revolutionize the digital economy, the sector is hampered by a lack of liquidity. Non-fungible tokens are not traded in pairs like cryptocurrencies, making it challenging to trade them on the secondary market.

The limited prospects for secondary market transactions have impeded the growth of the NFT market. To address this issue, introducing derivatives and indices is crucial to enhance liquidity and accessibility.

👉 Complexity in Identifying Blue Chip NFT Projects

In the rapidly evolving NFT space, it is challenging to determine the blue chip status of many projects. With a proliferation of projects launching daily, it becomes increasingly challenging to select the best investments.

Unfortunately, many projects claim to be blue chips but eventually become rugs (scams), making it imperative to conduct extensive research into the team, artist, community, utility, trading volume, presence, and security to identify genuine blue-chip projects.

👉 No Hedge to Protect Investors from the Downside Risk of NFTs

Unlike traditional investment assets, the NFT market is highly volatile due to its infancy, leaving investors with limited options to protect themselves from price volatility.

To mitigate the downside risk of NFTs, the development of perpetual futures and benchmark indices is crucial for building financial portfolios with greater diversification and precise position sizing.

Proposed Solution 💡

▶️ A Series of Financial Instruments Around NFTs

To truly scale the NFT ecosystem and enable user participation, we will launch a series of indexes focused on NFTs, starting with our first index - SuperNova (SNV).

SuperNova is an NFT-based perpetual DEX that gives users synthetic exposure to Blue-Chip NFTs, allowing users to speculate on the floor price of these premium NFTs.

This adds value to fractionalizing NFTs by generating passive fees and improves price discovery and the integrity of the underlying NFT market.

▶️ Unique Selling Proposition

➡️ **Orderbook Exchange -** Our platform offers all users a transparent and fair trading experience. Our system makes all orders visible to the public, with the bid and ask lists readily accessible. Orders are executed based on price and time priority principles, ensuring all transactions are completed efficiently.

We also acknowledge that slippage can cause frustration for traders, which is why we have implemented measures to minimize its impact. Users can buy, sell, and trade without incurring any slippage fees, giving them the confidence to trade without worrying about hidden costs.

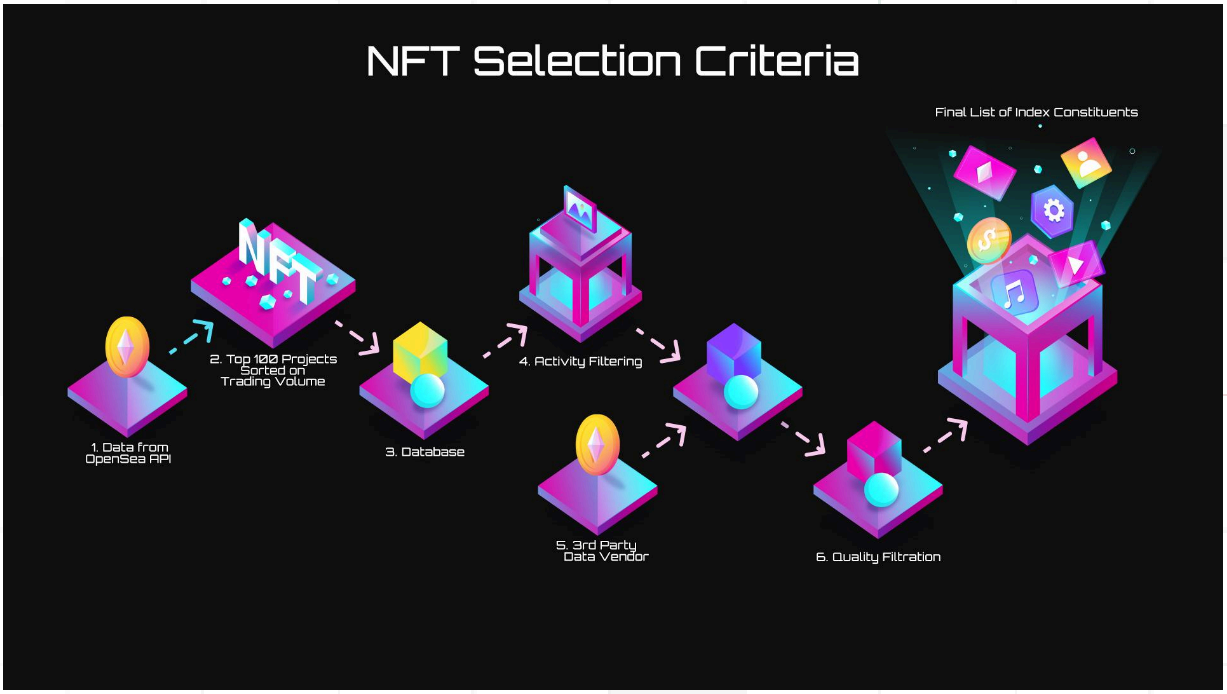
➡️ **Multi-token Margin -** Our platform offers seamless integration with a wide range of ERC-20 tokens, providing you with a vast choice of digital assets to invest in.

➡️ **Up to 10x Leverage -** Boost your trading potential by leveraging your funds with up to 10x leverage.

➡️ **Exposure to Multiple Blue-Chip NFTs -** Access a diverse portfolio of blue-chip NFTs, exposing you to some of the most sought-after digital assets in the world.

➡️ **Low Entry Barrier -** Invest in top-performing NFT collections at an accessible price point, eliminating the barrier to entry and allowing everyone to enter the exciting world of NFTs.

NFT Selection Criteria 🔎



The selection process of certain blue-chip NFTs is rigorous, involving multiple filtering stages to ensure that only the most valuable and high-quality projects are included in the final index. Please look at the diagram below to see the NFT selection process.

Step 1: The process begins by collecting data from Opensea APIs and sorting the top 100 projects based on trading volume.

Step 2: This data is fed into a database and actively filtered based on various criteria, such as

- **Total Trading Volume**

  We have handpicked projects that have transacted a minimum of 10000 ETH. They must be freely traded, with very low wash trading and illiquidity risk.

- **No. of Unique Owners**

  We've picked projects where the number of unique owners is at least 4000.

- **Verified Projects**

  Web3 is packed with copy-paste projects. To avoid the risk of counterfeiting or fraud, we only consider the projects verified and listed in the top NFT Marketplaces.

- **Time of Existence**

  We prioritize projects that have been actively running for at least one year and have a proven track record of success within the industry.

- **30-day Traded Volume**

  We highly prefer projects with solid activity and engagement. We consider projects with a volume greater than 500 ETH in the last 30 days.

Step 3: Next, we employ a 3rd party data vendor - BitsCrunch - to conduct an additional 'Quality Filtration' using Wash Trading Score and Collection Score as criteria to narrow the list of NFT projects further.

Step 4: The final selection of premium Blue-Chip projects is done based on all these filters and added to our NFT index.

Overall, this selection process ensures that only the most valuable and high-quality projects are included in the final index, providing investors with a reliable and trustworthy index of blue-chip NFT projects.

Core Concepts (Protocol Specs) 🔬

1) Funding Payments

➡️ The Significance

The SNV index price is calculated on the floor prices of the compositions and is essentially independent of our perpetual market. The SNV Mark Price, on the other hand, is discovered by the participants' trading activity.

During trading, the participants may deviate the Mark Price of the SNV away from the Index Price (which is taken as the underlying).

To de-incentivize the deviation of the Mark Price away from the Index Price, Funding Payment is introduced, which flows from long position holders to short position holders if the Mark Price deviates higher and vice versa.

➡️ Funding Rate

The funding rate is a determining factor at which the deviation between mark and index prices converges.

$$Funding\ Rate\ =\ (MarkPriceTwap\ -\ IndexPriceTwap)/IndexPriceTwa$$

$$Funding\ Amount\ =\ Funding\ Rate\ *\ PositionSize$$

The funding rate is bound to be kept between [-0.75% and 0.75%] at the protocol level.

➡️ Global Index(G)

Instead of sending out funding payments every hour, we are accumulating the funding of each user and settling whenever he/she interacts with the contracts.

We are maintaining a global Accumulator defined by the following:

$$Gt\ =\ Gt - 1\ +\ (\mathbf{\Delta}t)\ *\ (Mark\ -\ Index)\ /\ (86400)$$

Say, with 5 mins as the Delta,

$$Gt\ =\ Gt - 1\ +\ (Mark\ -\ Index)\ /288\ where\ (\mathbf{\Delta}n)\ =\ 5\ mins\ =\ 5\ *\ 6($$

Where,

$$\mathbf{\Delta}t\ =\ Time\ in\ seconds\ between\ Gt\ and\ Gt - 1$$

Thus,

$$Gi\ =\ (\Sigma i\ Marki\ *\ \mathbf{\Delta}i\ -\ \Sigma i\ Indexi\ *\ \mathbf{\Delta}i\ )\ /\ 86400$$

We also maintain a relative accumulator for each account with a position opened.

Whenever a user interacts with the account, funding to be paid is:

$$Funding = (Gi - Ii) * Position$$

Where Ii is the Cached Index maintained for each participant, this is reset as Gi every time after the funding is settled.

2) Liquidation

➡️ Liquidation Trigger

A liquidator can trigger liquidation if an account's Margin Ratio(MR) breaches the Maintenance Margin Fraction (MMF). The Maintenance Margin currently being used by the protocol is 0.0625.

➡️ Liquidation Price

Liquidation Price can be calculated for each position based on position size and amount.

For Longs,

$$LiquidationPrice =$$

$$(|EscrowedAmount - InitialPositionValue|)/((1 - MMF) * Quantity))$$

For Shorts,

$$LiquidationPrice =$$

$$(|EscrowedAmount + InitialPositionValue|)/((1 + MMF) * Quantity))$$

Where $EscrowedAmount\ tracks$ the Deposited/Withdrawn balance.

➡️ Liquidation Penalty

The liquidation penalty is deducted from the trader's margin, with 80% directed toward the protocol and the remaining 20% allocated to the liquidator based on the remaining margin balance.

Example: Suppose a trader named Alex deposits 100 WETH and opens a short position of 100 SNV at an opening price of 10 WETH.

Alex's initial Margin Ratio is 0.1 since the position's initial value is 1000 WETH and the collateral held in escrow is 100 WETH.

This is above the MMF of 0.0625, so Alex's position is initially safe.

However, if the market price of SNV changes to 10.36 WETH, Alex's position is now worth 1036 WETH, and his escrowed funds of 64 WETH now only cover 61.77% of the position's value.

Therefore, Alex's Margin Ratio has fallen to 0.0617, which is below the MMF. At this point, Alex's position will be liquidated.

The liquidation price for Alex's position is calculated as follows:

$$LiquidationPrice =$$

$$(|EscrowedAmount + PositionValueAtOpen|) / ((1 + MMF) * PosSize$$

$$(|100 + (1000)|) / ((1 + 0.0625) * 100)$$

$$= 10.3529\, WETH.$$

This means Alex's position will be liquidated once the price hits 10.3529 WETH. The liquidation penalty will be 64.71 WETH, with 51.76 WETH going to the protocol and 12.94 WETH going to the liquidator.

➡️ Liquidation Bot

The Liquidator Bot is an open-source tool that anyone can run. It utilizes an in-house liquidation suite to retrieve liquidatable accounts from the subgraph and performs liquidations through API routes in the order processor, making the process efficient and streamlined.

3) Margin Specs

➡️ Margin Ratio

The Margin Ratio is a crucial metric used to measure the level of risk associated with a given position. It is calculated by dividing the position's value by the collateral's value.

For example, if you deposit 10 WETH and go long on 5 SNV at a price of 20 ETH, your Margin Ratio would be 0.1 (10/100).

However, as SNV prices fluctuate, so does the Margin Ratio.

For instance, if the price of SNV were to rise to 25 ETH, your unrealized profit would be 25 ETH, thus increasing the value of your collateral to 35 WETH. This would result in a new Margin Ratio of 0.28 (35/125).

On the other hand, if the price of SNV were to decrease to 19 ETH, the value of your collateral would decrease to 5 WETH, resulting in a Margin Ratio of 0.052 (5/95).

Monitoring the Margin Ratio regularly is essential, as a low ratio may indicate a high level of risk for the position.

➡️ Buying Power

Buying power refers to the maximum amount you can go long or short on using the available balance in an account. NFTFN is currently offering leverage of 10x on SNV, which means that for every dollar deposited, you can buy up to 10 dollars worth of SNV.

For instance, if you deposit 10 WETH into your account, your buying power becomes 100 WETH (10 WETH x 10x leverage).

This means you can now open a short position of 2 SNV at a price of 10 ETH. This would result in a new buying power of 80 WETH (100 - 20), as you have used a portion of your available balance to open the short position.

➡️ Margin Usage

Margin Usage refers to the margin percentage currently utilized in a given position. For instance, if you deposit 10 WETH into your account, your Margin Usage would be 0%.

However, if you open a long position of 2 SNV at a price of 10 ETH, your Margin Usage would be calculated as 20/100 = 0.2

This indicates that 20% of the margin deposited in your account is being used to hold the open position.

➡️ Mark Price

The price of a derivative in our native market is called Mark Price. To determine this value, we use a method known as an order book price discovery, which serves as the primary mechanism for price discovery.

$$\boxed{MarkPrice = (LowestAsk + HighestBid)/2}$$

➡️ Account Value

The value of your account, represented by $AccValue$ is the sum of your account's realized and unrealized gains or losses.

$$\boxed{AccValue = Collateral + UnrealizedPnL + RealizedPnL}$$

In this scenario, imagine you have deposited 10 WETH and taken a long position of 5 SNV at a price of 20 WETH.

Your initial account value would be 10 ETH. However, five days later, the value of SNV increases to 30 ETH, and you incur a funding fee of 0.0002 WETH.

As a result, we would then calculate your account value as 10 ETH + [5 SNV * (30 ETH - 20 ETH)] - 0.0002 ETH = 59.998 WETH.

➡️ Health Factor

The "Health Factor" is a metric used to assess the likelihood of account liquidation. The closer an individual or organization reaches its minimum maintenance margin (MMF), the higher its liquidation risk becomes.

This metric serves as a warning indicator for traders and investors to take action to avoid potential financial loss.

$$\boxed{Health\ Factor\ =\ 100\ -\ Risk\ Factor}$$

MMF is currently being set at 0.0625

Roadmap 🚀

1) Cross-Margin Support Across Multiple Markets

We aim to implement cross-margin support across multiple markets, granting traders increased flexibility, enhanced risk management capabilities, and optimal capital utilization.

Cross margin refers to a margin trading system in which a user's margin is shared across all trading pairs in a market. In other words, when a user has a long or short position in one trading pair, the margin they have placed can also open positions in other trading pairs within the same market.

This allows the user to increase their leverage potentially but also increases the risk of liquidation if the market moves against them. We typically use it in crypto exchanges.

2) On-Chain Order Matching

We aim to become fully decentralized by moving to on-chain order matching.
On-chain order matching is a decentralized process that utilizes smart contracts to match and execute trades on a blockchain network.

This process offers several benefits, such as decentralization, which eliminates the need for a central authority to control or monitor the trades, making the trading process more secure.

Additionally, smart contracts can automatically match and execute trades, increasing trades' speed and efficiency. The transparency provided by the blockchain also increases trust and confidence in the trading process.

The blockchain is tamper-proof, which provides a high level of security for all transactions. Additionally, On-chain order matching reduces trading fees and costs associated with maintaining a centralized trading infrastructure.

Finally, smart contract-based order matching enables users to set up and customize the rules of their trades, giving them more control over the terms of the trade.

3) Multiple Indexes Tailored to Suit the User’s Risk Profile

We aim to offer a diverse range of financial indexes to cater to the varying risk preferences of our users. For individuals seeking low-risk, we will launch indexes that only feature blue-chip NFTs, known for their minimal fluctuation in value.

Conversely, for those willing to take on more risk - aka Flippers - in pursuit of higher returns, we will introduce high-risk and volatile indexes that offer the potential for greater returns but also have a higher level of volatility.

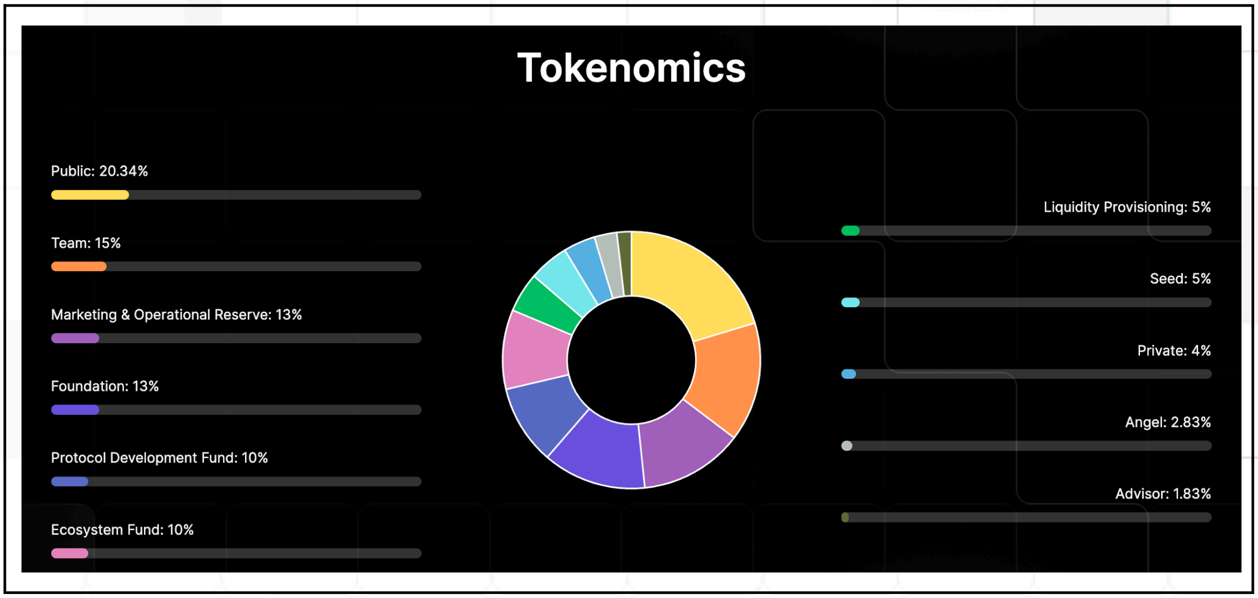
4) Exploring the Integrations with RWA: Real-World Assets

The market for Real World Assets (RWAs) is worth $330 trillion, and a growing number of startups are tokenizing RWAs in compliance with regulations.

We are positioning ourselves at the forefront of this rapidly developing technology by opening up several avenues that will enable us to offer innovative financial products built on top of this booming industry.

With our deep knowledge and experience in this field, we are well-poised to take advantage of the huge growth potential in this market.

Tokenomics



Our Backers & Investors

We are proud to be supported by a diverse and esteemed group of backers and investors who share our vision and passion for innovation in the NFT space.

Our backers include -

- Google (Cloud Partner)
- Opensea, BitsCrunch, and NFT Bank (Pricing Partners)
- WOW Earn (Wallets)
- Goblin Town (NFT Community)
- Binance Smart Chain and Polygon (Blockchain Partners)

Our investors include -

- Alpha Wave Global
- Polygon
- Chingari
- Pivot
- Reflexical
- FanTv
- Dapps
- Dineout
- OkAcquired
- Aumirah
- Sigurd Ventures

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