

Nord Finance

An advanced decentralized financial ecosystem

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<https://nordfinance.io>

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Abstract

As the global financial markets evolve to push adoption of new financial products further, it's imperative for us to reflect on how the dynamic landscape positions itself to explore diversified markets. We must evaluate the role decentralized finance will play in the next stage of evolution of financial instruments as we understand them. Decentralized Finance has sparked innovation in a quest to outplay centralized control known to abstain financial freedom of users.

Decentralized Finance has fuelled innovation by disrupting the traditional financial landscape through innovative products. The permissionless financial system has unbolted numerous possibilities to dive into a new financial age through sleek and intuitive financial primitives. Therefore, projects are making unwavering efforts to execute the mission of financial inclusion, starting with the inception of DeFi.

The year 2020 has been a magnificent year for DeFi in terms of magnitude as it surpassed its previous milestones at a breakneck speed driven by massive demand for DeFi products. This year witnessed the DeFi landscape crossing over USD 13 billion in total value locked across various DeFi protocols, yet this represents only a fraction of the total potential. Certainly, with the continued momentum, the DeFi ecosystem promises a sustained growth of over USD 100 billion over the course of two-three years.

As DeFi has barely scratched the surface, with the current agility in the space, it is predicted that the next engine of growth will be to pick up further pace and drive mass adoption. Thus, unleashing its potential in the fullest disposition. The ultimate intention lies in banking the unbanked 1.7 billion people globally and resolving prevailing issues of the traditional financial landscape. The same is expected to be achieved by constituting attributes such as user-centric approach, cost-effectiveness, financial inclusion, seamless transaction mechanisms, and financial awareness.

Currently, the DeFi industry is in its nascent stages; thus, there is a lack of intuitive infrastructure for novice users to engage in the ecosystem actively. Therefore, portraying a navigation challenge for potential users. Its prerequisites constitute a steep learning curve and a good command over technology, which contrasts with traditional financial systems.

Additionally, high volatility and information asymmetry are few exceptional challenges that lead to lower adoption of DeFi among novice users, with millions of potential users waiting on the sidelines for better infrastructure. To deliver the next

milestone of its growth, reach its full potential and drive mass adoption, the DeFi ecosystem needs to be made more accessible.

Through this paper, we aim to simplify the decentralized financial landscape for potential users. We envision building products that contribute to the DeFi ecosystem such that it drives masses from the traditional finance space in a quest to maximize returns. Thus, unlocking the full potential of DeFi.

With the current fragmentation plaguing the DeFi industry through lack of available support for users, the Nord Ecosystem serves the purpose by offering a wide range of niche services right from advisory and consultation services to loans and cross-chain swaps.

Introduction

Nord Finance, a blockchain agnostic platform, is an advanced decentralized financial ecosystem focusing on simplifying decentralized finance products for users by highlighting traditional finance's key attributes. Deployed on the Ethereum Network, it integrates multi-chain interoperability, thus proposing a plethora of financial primitives, which constitute savings, advisory, loans against assets, investment/funds management, and swaps.

The platform governance allows users the freedom of choosing the optimal yield-farming strategies that could benefit them based on their requirements. In order to deliver the highest possible risk-adjusted returns through multi-chain yield-farming, various strategies are outlined. The most highlighting feature constitutes smart contracts' interoperability that delivers the highest APY by dynamically rebalancing and re-routing digital assets across liquidity pools that maximize yields.

What distinguishes Nord Finance from other permissionless protocols is its in-built Robo-advisory feature that curates customized strategies for potential users in tandem with the pre-planned financial objectives. Thus, Nord Finance becomes an integral part of the users' financial journey. The platform also offers possibilities of borrowing loans against their crypto assets and cross-chain swaps seamlessly, thus fixing a missing piece in the trustless ecosystem.

At Nord Finance, we are thriving towards building a comprehensive and integrated solution for the ever-advancing decentralized financial ecosystem to assist users in their financial journey. Thus, we are primarily focusing on four significant products:

Key Products

- Nord.Savings: Earn highest risk-adjusted APYs across chains
- Nord.Advisory: Risk profile based Robo Advisory
- Nord.Loans: Overdraft crypto loans/loans against portfolio
- Nord.Swap: Multi-chain asset swap facility for DeFi users

The platform's network design and infrastructure are Ethereum compatible and blockchain agnostic. It advocates volumes about how instant deposits and withdrawals with the lowest possible network fees by pooling multiple users' liquidity could redefine the DeFi landscape, specifically for users. Nord Finance aims to ameliorate the adoption of the DeFi Ecosystem with its simple yet intuitive user interface. It delivers comprehensive functionality solutions for the efficient utilization of digital assets to outplay the prevailing dynamics in the permissionless space.

We believe the Nord Finance ecosystem can accelerate the mass adoption of DeFi by diminishing entry barriers, revamping accessibility to all-new levels, and ensuring maximum useability for all market participants.

Pain Points barring the growth of DeFi

To novice users, DeFi participation seems a lot more intricate than it is. However, those with a technological-edge sail through the process without any limitations. They efficiently deploy and execute complex yield farming strategies and various contractual agreements with little effort, thus exposing themselves to pools of bungee ensuing maximum gains. The majority of the users are neither financially aware of formulating customized strategies nor have the resources to administer in-depth research to execute high APY trades. Due to the lack of professional advisory services similar to traditional finance, the DeFi Ecosystem, despite the high potential, continues to have low mainstream adoption.

The prevailing infrastructure fails to accommodate the nuances of novice users in totality. The absence of customer-centric infrastructure and DeFi projects' approach has led to potential users facing technical complexities, thus limiting them to participate in the DeFi revolution actively. This has further created a perception that the crypto industry is ideal for technological enthusiasts and tech-savvy users, knowing the space's nitty-gritties. To unleash the potential of the decentralized financial landscape, these crucial aspects must be considered keenly.

With respect to the current landscape, the DeFi industry possesses various challenges:

It's Whale Centric:

Tech-savvy users (whales or technically adept) participate in customized yield-farming strategies to deploy their funds and maximize their returns, novice DeFi users are forsaken due to lack of knowledge. To promote greater adoption and attain scalability in the DeFi ecosystem, the playing field needs to be refurbished in a way that grants ample opportunities to every user. The DeFi ecosystem is still in its nascency; there exists a lack of multiple trustless financial instruments to cater to the DeFi users.

Information Asymmetry:

With the ongoing DeFi explosion, the industry is all the rage. This has attracted the attention of various newbies to explore opportunities in the world of modern finance. In order to propel new crypto enthusiasts, there is a lack of tools/mechanisms at their services to encourage participation. There's a compelling demand for efficient advisory services in tandem with the prevailing scarcity in the DeFi landscape. To execute the mission of empowering financial accessibility to all, the knowledge gap between various market participants needs to be bridged to provide financial inclusion.

Lack of Intuitive and sleek products similar to traditional finance:

With traditional financial markets venturing into a variety of options for users, it serves as a foundation to upscale for the decentralized financial landscape. The DeFi ecosystem must thrive towards offering sophisticated and innovative products that surpass the dominance of traditional financial instruments.

Due to redundancy in the traditional financial landscape, users are keener on utilizing and experiencing innovative products that could maximize their portfolio returns. Therefore, traditional markets are parallelly dependent on modern institutions to cater to the users' overwhelming demand.

The DeFi ecosystem revolutionized the Fintech space by granting developers the power to design and deploy various user-focused financial instruments bypassing these institutions. It has also encouraged users to demand innovative and sleek products that have fuelled innovation amongst the developers. However, with the inception of the *movement*, we believe the availability of such sophisticated financial products continues to remain limited. Thus, we believe that bridging the gap between traditional finance and DeFi is key to driving the DeFi ecosystem's mass adoption.

Saturation in Yield farming pools:

Since DeFi is all at rage at the moment, the number of users venturing into yield farming pools have substantially increased. Therewith tech-savvy users employing customized strategizing by hopping onto various pools, in a quest for best yield, novice users are majorly forsaken due to lack of knowledge and dexterity of execution, resulting in poor yields. Users must make a phenomenal effort to forecast the yield curve by employing pre-planned strategies to maximize their returns to the greatest potential.

Impermanent Loss:

In Automated Market Maker(AMM) pools, price fluctuations in the underlying currency lead to a loss for liquidity providers vis-a-vis simply holding the tokens in a wallet. This challenge alienates users as it is a massive shift from traditional finance.

Low Latency and High Gas Fees:

One of the greatest challenges confronted by the Ethereum Network constitutes low latency and high gas fees due to the exploding network congestion. Currently, it is one of the major limitations of DeFi adoption. The platform users are buried under the weight of high gas fees, making it quite difficult to execute multiple transactions, thus serving as a hindrance to driving the permissionless landscape in relation to the traditional counterparts. While protocols built on L2 networks are striving towards solving this, they are still in a nascent stage.

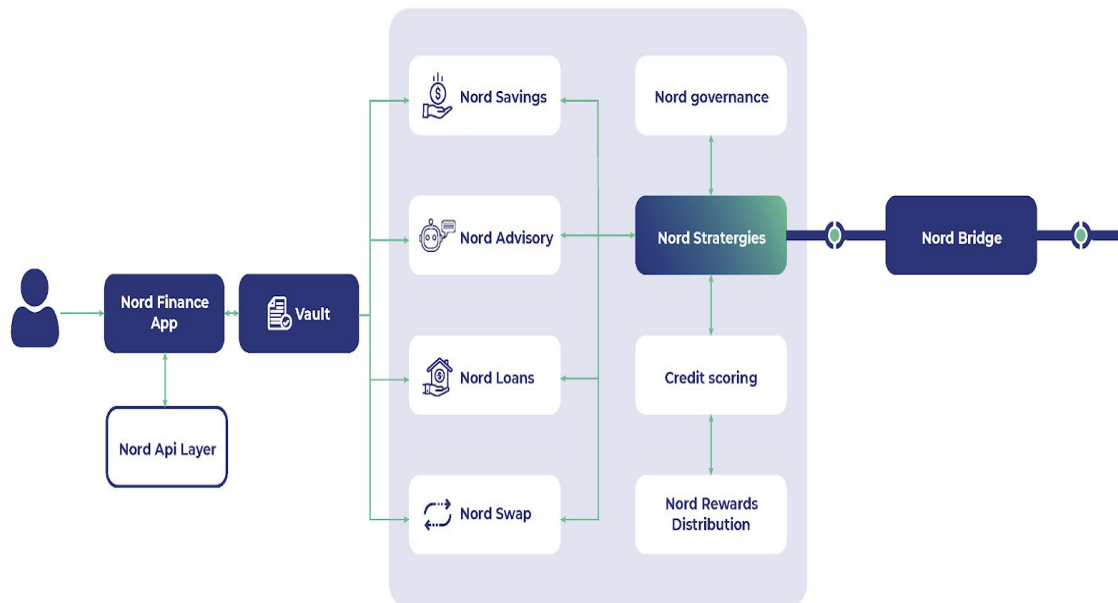
Ubiquity of Ethereum Network:

With the massive adoption accelerated on the Ethereum Network, prominent users can't migrate immediately to a parallel network. The primary cause being the substantial amount of assets held on the crypto assets existing in the Ethereum Network. For users to undergo a sudden shift, they will require to exit the existing positions held on various virtual digital assets on the Ethereum blockchain. In the frequent case, this seems suboptimal for users. Therefore, the only possible way the users can make a drastic shift is by incentivizing and luring users with staking rewards that might accrue to them.

The FIX: Nord Finance

At Nord Finance, we are developing an integrated decentralized financial ecosystem to serve the rising needs targeting novice users and professionals to meet their financial goals.

With the aim of driving DeFi adoption, we introduce four key products that will redefine the permissionless landscape for potential users.



Nord.Savings:

Allows optimizing returns through a multi-chain yield-farming mechanism for stable coin farming with the highest possible risk-adjusted returns. To maximize returns, the protocol employs the highest risk-adjusted APY's. Whereas it leverages the DeFi Score framework to assess and analyze the dynamics of protocol risks. Nord.Savings provides a seamless interface to access the world of DeFi-based yield farming effortlessly without any technical implications as the traditional financial counterparts.

Nord.Advisory:

An inbuilt robo-advisory service designed to chalk out profitable and customized strategies for users to hold better positions based on their financial goals. The automated robo service analyzes the user profile and evaluates personalized solutions that will help accomplish the users' financial goals by employing a diversified portfolio. The data-driven proprietary algorithms facilitate unleashing the potential of a certain portfolio by executing smart tactics. This service is a revolutionary move as the technical nitty-gritty of the DeFi landscape might seem a bit complex for novice users, thus demanding assistance for the same.

Nord.Loans:

DeFi users can leverage their crypto assets to their greatest potential by pledging them in smart contracts to avail loans for unanticipated circumstances. The process to avail of an instant over-collateralized loan is quite uncluttered and hassle-free. This is a smart alternative to borrowing loans without liquidating the crypto assets to meet financial obligations. It also offers a personal overdraft facility with the benefit of paying interest while withdrawing the amount.

Nord.Swap:

Built on the Ethereum Network, Nord.Swap is a blockchain agnostic permissionless instant swap protocol driving cross-communication and interaction of virtual digital assets effortlessly. The future of decentralization rests in multi-chain. Therefore, Nord.Swap powers innovation by offering a multi-chain swap facility for DeFi users. This is one of the essential aspects of a decentralized future.

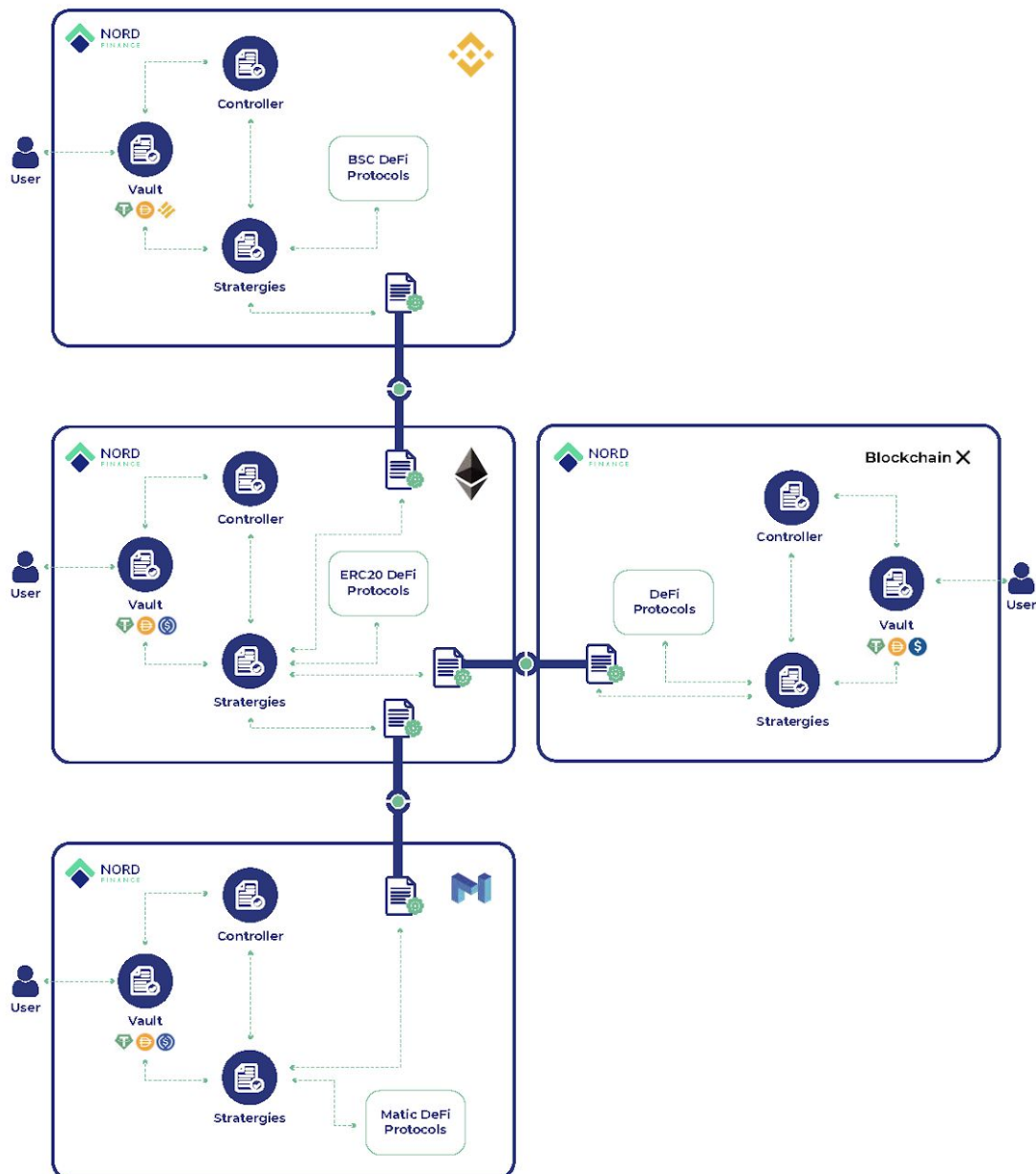
Key Attributes of Nord Finance:

- **Highest Returns:** Automated portfolio rebalancing mechanism across various liquidity pools for the highest risk-adjusted APY
- **Automated Robo-advisory services:** Customized strategies formulated based on user interest designed to meet their financial goals
- **Cross-Chain Swaps & Interoperability:** Provide cross-chain liquidity to ensure users across other chains have access to DeFi ecosystem resulting in smooth-trades and better liquidity
- **Loan against crypto assets:** Providing liquidity to users by offering a pledging mechanism of their crypto assets in the protocol to borrow loans seamlessly
- **Transparency:** All transactions are visible on the blockchain thus ensuring complete transparency to all users
- **Community Driven:** Nord Finance governance token's primary utility constitutes voting on proposals pertaining to yield-farming strategies
- **Zero-Cost Transactions:**
 - No upfront network fee for deposits; the smart contract absorbs the gas fee, which is adjusted in the final APY
 - Pooled liquidity to deliver up to 99% savings on the transaction fee to its users thus making the DeFi ecosystem accessible to the masses

- **Connect & Stake:** A hassle-free mechanism facilitating seamless user experience with an intuitive UI offering one-click access to DeFi Yield Farming
- **Intuitive & Easy to Use UI:** Track portfolio & APYs in real-time through seamless interoperability, thus enhancing overall user experience

Nord Finance's Network Architecture & Implementation Plan

The Nord Finance's Core Architecture has four significant components:



Nord.Vault

The Nord.Vault is a user-focused smart contract built to execute deposits and withdrawals of native stablecoin assets seamlessly without third party interference. It offers an easy gateway for the purchase and conversion of stablecoin assets in an uncluttered way. Users are free to exercise real-time control over their virtual digital assets in a non-custodial and decentralized manner.

The Nord.Vault possesses an inbuilt mechanism of converting the native \$NORD tokens into stablecoin assets effortlessly due to the protocol's adequate liquidity functionality. It simplifies the conversion of digital assets safely and securely.

Nord.Strategy

An automated tool to formulate the best strategy across stable coins yields farming pools on various blockchains. Nord.Strategy tracks prices, pool-wise liquidity, current & historical pool APY trends, and assigns a risk score to each strategy in real-time. The protocol automatically allocates capital based on these pool-wise risk-scores to deliver the highest APY while following the community-identified risk strategies as guard-rails.

Nord.Controller

Nord.Controller thrives on the operational front to manage the entire operations efficiently. Its workflow constitutes understanding, interpreting, and executing the pre-defined strategies. Besides, it allocates capital based on these strategies. It is designed to execute specific triggers around pool-risk; thus, the controller takes action without any human intervention.

Nord.Bridge

Designed as a unique combination of smart contracts to facilitate cross-chain transactions to enhance platform's utility and drive functionality. Therefore, there are two significant aspects to consider to implement the use-case of the protocol - atomic cross-chain swaps followed by cross-chain bridges.

The Atomic cross-chain swaps facilitate token exchange from one blockchain network to another.

In comparison, the cross-chain bridge serves as an instant transaction mechanism across different blockchain networks.

The Nord.Bridge mechanism allows connecting the ERC20 contracts to other compatible blockchain and side chains such as Binance Smart Chain, Matic Network, and others. The Nord.Bridge is designed to deliver the best of both worlds by promoting token swaps in real-time and depositing/withdrawing funds across compatible blockchains. This fuels adoption as it helps integrate seamless access to financial markets and different financial instruments under one roof.

The Nord.Bridge and Nord.Controllers are interoperable as the former facilitates the latter to extract the APY details across different compatible chains. Thus, making the process easier as all relevant data is available at the same place in real-time.

Specific Principles Followed by Nord Finance

1. Key Principles for Nord.Savings:

1.1 Risk Mitigation Mechanism:

Nord Finance leverages the DeFi Score framework in order to mitigate risks while delivering the highest possible APYs. The DeFi Score Framework is designed utilizing the native proprietary algorithm to deliver the highest risk-adjusted APY for platform users. This mechanism succours potential users to minimize risks and maximize returns.

Interpreting the DeFi Score Framework¹

The DeFi Score is a structure that facilitates quantifying risk in a trustless lending pool. It is a framework that helps in interpreting the magnitude of risks involved in the decentralized protocol. The project was originally designed by ConsenSys and is now open-source. To assess various risks prevalent in the DeFi ecosystem, the DeFi score rates each protocol considering three key facets - Smart Contract Risk, Centralization Risk, and Financial Risk.

1.1.1 Smart Contract Risk

Smart contract Risk essentially means the risk associated with a smart contract's failure, resulting in substantial losses. In a decentralized financial ecosystem, smart contracts play a major role as intermediaries intending towards the contract's execution. Although known as trustless and permissionless, a DeFi user trusts the integrity of the contract they are interacting with. Therefore, the DeFi score considers aspects such as Code Audit Reports, test checks being publicly available, reviews, bug bounty programs, and the contracts time on mainnet while assigning a rating to the contracts.

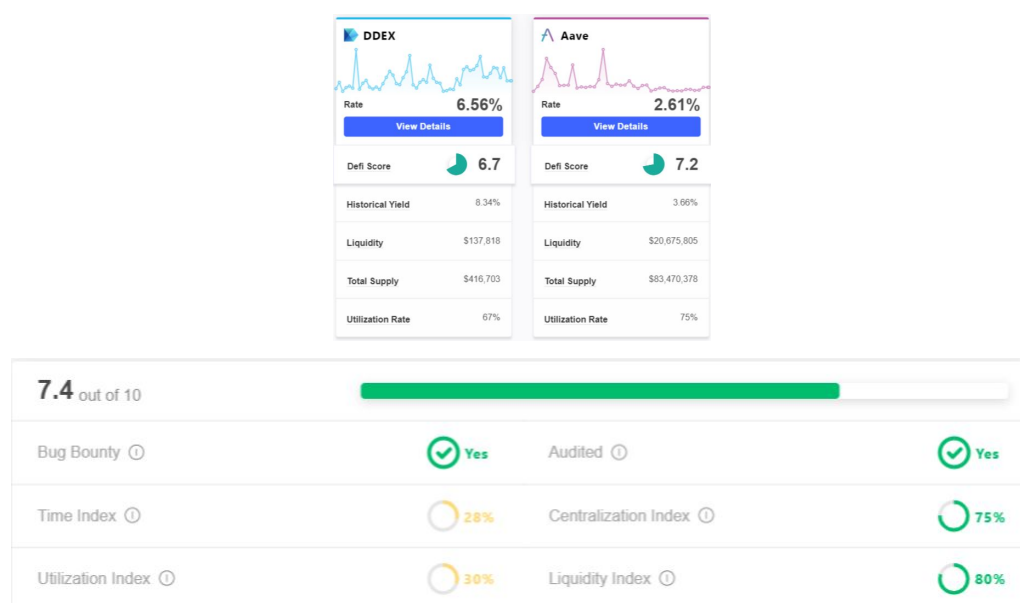
1.1.2 Financial Risk

Over-collateralization is a key component while analyzing credit risks for lending platforms. However, it does not entirely eliminate credit risk. The dynamic nature and market volatility of crypto assets make it almost unpredictable to forecast the future. Moreover, these trustless protocols have no clear operation mechanism to recover from system insolvency caused by volatile crypto collateral assets. The DeFi Score scrutinizes the prevalent liquidity and the collateral ratio of the protocol while rating the risk.

1.1.3 Centralization Risk

The Centralization Risks advocates about the risk relating to the concentration of control under certain individual parties that lead to dire harm to the protocol. The foundational stone for the DeFi industry's advent is to fuel the decentralization of power and authority. Centralization of authority leads to the access of admin keys to protocol developers or key individuals, which might result in altering set parameters such as specific arrangements of oracles, interest rates, or even draining of funds. The DeFi Score assigns ranks to various protocols based on two key facets - protocol administration and the type of oracles used by the protocol.

The DeFi Score framework provides a simple score with an integrative API to the Nord Finance Risk Mitigation Framework's smart contract to identify the protocol risk.



The Nord Finance Risk Mitigation framework is primarily designed to pool relevant information from the DeFi Score platform. Another utility of the DeFi Score Framework is facilitating capital allocation decision based on the following:

- Team Background - Anonymous vs. Public Teams
- APY Fluctuations - Daily tracker on APYs to determine fluctuations and reallocate capital
- Protocol Integration - <5% allocation to 3rd party lending protocols to observe reliability and security before complete integration.

1.2 APY Maximization:

Nord Savings constantly tracks the APY trends for relevant pools to make capital allocation decisions while maintaining the pre-defined risk profiles.

The automated tool is designed to identify the best stable-coin based yield-farming strategies across blockchains. The module tracks prices, pool-wise liquidity, current

& historical pool APY trends. Post which, the module allocates capital based on pool-wise risk-scores with the objective of delivering highest APY while following the community identified risk strategies as guard-rails.

2. Key Principles followed by Robo-Advisory:

2.1 User Risk Profiling:

Nord's risk profiling mechanism evaluates the user's risk profile based on their risk required, risk tolerance and risk capacity to accomplish the user's financial goals.

Risk required determines the optimum amount of risk needed to achieve the financial goals while the risk tolerance and risk capacity act as the balancing factors to determine the level of risk the user is comfortable with.

Thus, the risk profiling framework chalks out the optimal level of risk/drawdown that a user can possibly tolerate in relation to the expected returns.

2.2 Portfolio Rebalancing:

Data-driven proprietary algorithm deploys stablecoins in a diversified asset portfolio in tandem with a user's financial goals. Due to the dynamic nature and abrupt volatility of digital virtual financial primitives, portfolio rebalancing facilitates adjusting risks intermittently to minimize user's risk exposure through advanced automated solutions. Certainly, it restores the users' portfolio to its target allocation with a desired asset mix by divesting underperforming assets and purchasing the ones which potentially surge.

3. Key Principles for Loans:

Nord.Loans builds on the founding principles laid down by Compound Finance².

3.1 Collateralization Ratio:

Assets held under the NORD protocol are defined as the portfolio value. This portfolio can be used as collateral to borrow from the protocol.

To determine the available borrowing limit a collateral factor, ranging from 0 to 1, is used. This factor represents the portion of the underlying portfolio value that can be borrowed.

Thus, the portfolio value of the users multiplied by the collateral factor, equals the user's borrowing capacity. The borrowing capacity **C** is defined as:

$$\mathbf{C} = \mathbf{Collateral\ Factor\ (0-1)} * \mathbf{Portfolio\ Value}$$

3.2 Risk & Liquidation mechanism:

In case any account's borrowing outstanding exceeds their borrowing capacity determined by collateralization ratio, a portion of the outstanding borrowing needs to be repaid at the current market price minus a liquidation discount. Thus, the token

value at which the borrowing needs to be repaid in case of liquidation will be lower than the market price:

$$\text{Token Value} = \text{Current market price} - \text{Liquidation Discount}$$

The proportion eligible to be closed, a close factor, is the portion of the borrowed asset that can be repaid, and (ranges from 0 to 1, such as 25%).

$$\text{Close Factor (0-1)} = (\text{Total Borrowing} - \text{New Borrowing Capacity}) / (\text{Total Borrowing})$$

For example, for assets worth USD 1000, the available borrowing limit is USD 700. Now, assuming the asset value drops by USD 100. The new borrowing limit for the user is now USD 630 = (1000-100)*0.7. **Thus, a close factor is determined as USD (700-630)/700 = 0.1**

The liquidation process may continue to be called until the user's borrowing is less than their borrowing capacity. The repayment value is calculated as follows:

3.3 Interest calculations:

Rather than individual suppliers or borrowers having to negotiate over terms and rates, the Nord protocol utilizes an interest rate model that achieves an interest rate equilibrium, in each money market, based on supply and demand.

Following economic theory, interest rates (the "price" of money) should increase as a function of demand; when demand is low, interest rates are low, and vice versa when demand is high.

The utilization ratio U unifies supply and demand into a single variable:

$$U = \text{Borrows} / (\text{Cash} + \text{Borrows})$$

The demand curve is codified through governance and is expressed as a function of utilization. As an example, borrowing interest rates may resemble the following:

$$\text{Borrowing Interest Rate} = 2.5\% + U * 20\%$$

The interest rate earned by suppliers is implicit , and is equal to the borrowing interest rate, multiplied by the utilization rate.

4. Key Principles Swaps:

4.1 Multi-Chain swaps:

The Nord.Swap enables users to swap their assets across all supported blockchains. To drive adoption of DeFi, it is imperative for protocols to build infrastructure that supports interoperability, creating a coherent user experience for users and traders.

With, Nord.Swap is designed to offer a seamless experience to users looking to swap their assets across blockchains.

4.2 Multi-chain Liquidity & Instant Swaps

The current DeFi revolution is largely centered around Ethereum while other blockchain users are yet to get access to DeFi. Additionally, slow transactions are one of the greatest limitations in the DeFi landscape. The explosive demand for executing transactions leads to network congestion, resulting in slow trades. With Nord.Swap, we plan to enable access to DeFi for users from other blockchains e.g., Tezos, Binance Chain, Matic, Polkadot etc by enabling cross-chain liquidity and instant swaps.

Token Utility, Infrastructure & Governance

What is \$NORD?

The native digital cryptographically-secured utility token of the Nord Finance ecosystem (**\$NORD**) is a transferable representation of attributed functions specified in the protocol/code of the Nord Finance ecosystem, which is designed to play a major role in the functioning of the ecosystem on the Nord Finance ecosystem and intended to be used solely as the primary utility token on the network.

\$NORD is a non-refundable functional utility token which will be used as the medium of exchange between participants on the Nord Finance ecosystem. The goal of introducing \$NORD is to provide a convenient and secure mode of payment and settlement between participants who interact within the ecosystem on the Nord Finance ecosystem, and it is not, and not intended to be, a medium of exchange accepted by the public (or a section of the public) as payment for goods or services or for the discharge of a debt; nor is it designed or intended to be used by any person as payment for any goods or services whatsoever that are not exclusively provided by the issuer. \$NORD does not in any way represent any shareholding, participation, right, title, or interest in the Foundation, the Distributor, their respective affiliates, or any other company, enterprise or undertaking, nor will \$NORD entitle token holders to any promise of fees, dividends, revenue, profits or investment returns, and are not intended to constitute securities in Singapore or any relevant jurisdiction. \$NORD may only be utilised on the Nord Finance ecosystem, and ownership of \$NORD carries no rights, express or implied, other than the right to use \$NORD as a means to enable usage of and interaction within the Nord Finance ecosystem.

\$NORD would also provide the economic incentives which will be consumed to encourage users to contribute and maintain the ecosystem on the Nord Finance ecosystem, thereby creating a win-win system where every participant is fairly compensated for its efforts. \$NORD is an integral and indispensable part of the Nord Finance ecosystem, because without \$NORD, there would be no incentive for users to expend resources to participate in activities or provide services for the benefit of the entire ecosystem on the Nord Finance ecosystem. Given that additional \$NORD will be awarded to a user based only on its actual usage, activity and contribution on the Nord Finance ecosystem, users of the Nord Finance ecosystem and/or holders of \$NORD which did not actively participate will not receive any \$NORD incentives.

In order to promote community governance for the network, \$NORD would allow holders to propose and vote on governance proposals to determine features and/or parameters of the Nord Finance ecosystem (including future deployment/spending of

protocol treasury funds), with voting weight calculated in proportion to their token holdings. For the avoidance of doubt, the right to vote is restricted solely to voting on features of the Nord Finance ecosystem; the right to vote does not entitle \$NORD holders to vote on the operation and management of the Foundation, its affiliates, or their assets, and does not constitute any equity interest in any of these entities.

Users can either mine \$NORD token via our liquidity mining program or purchase \$NORD in later stages via centralized and decentralized exchanges. Its primary utilities include voting, staking, and employing yield farming strategies across different DeFi platforms.

Utility Highlights :

\$NORD token has various utilities in the Nord Finance financial ecosystems:

- **Liquidity Mining:** In order for the Nord Finance ecosystem to function properly, users would need to be incentivised to play the role of liquidity providers and stake their digital assets into the market making pools. As compensation for opportunity costs as well as impermanent losses, these liquidity providers which help to promote adoption of the Nord Finance ecosystem by staking or including assets to liquidity pools would be rewarded with \$NORD tokens (i.e. liquidity "mining" programs on the Nord Finance ecosystem), according to each user's relative contribution after various adjustment and correction parameters.
- **Incentivizing programs:** Users can earn \$NORD token incentives by participating in the platform, for example trading/exchanging, or development of new strategies for the vault.
- **Distributing Fee Rewards:** In order to stimulate participation in the platform , \$NORD token will be distributed as rewards to users for various contests and community giveaways.
- **Community governance incentives:** The \$NORD token holders will earnestly participate in the protocol's governance by voting on various proposals regarding product upgrades. Users will be required to stake their \$NORD tokens in the staking program to participate in governance and vote on proposals, and as a reward they will be able to earn additional \$NORD tokens proportionate to their contributions.
- **Service fees:** For the services rendered a small fee/profit share would be charged by the protocol in \$NORD. These fees will be retained in the protocol treasury.

- **Cross Chain Settlement:** Using the \$NORD token as the base platform currency, \$NORD will expedite digital asset swaps between compatible blockchain seamlessly.

\$NORD Governance:

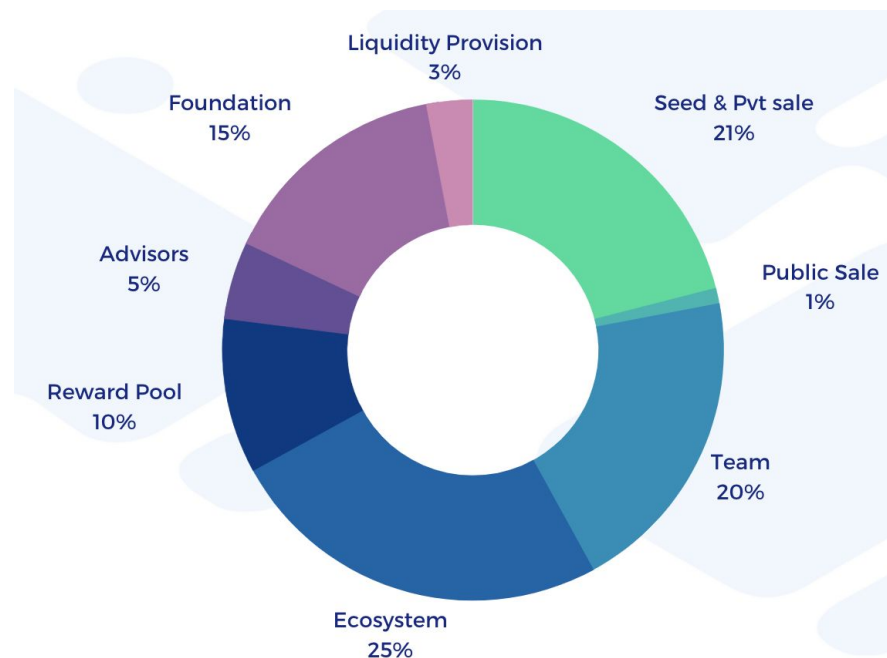
The Nord Finance recent upgrades and launch strategies will navigate under the centralized authority of the protocol. Since the protocol is yet in its nascent stages, the centralized control will assist in driving initial decisions ideal for the protocol's growth. These will primarily include exercising major decisions such as selecting lending platforms, deploying advisory contracts, deciding on the integration of overdraft facilities, and other initial decisions to drive the protocol's success.

However, gradually as things fall righteously, Nord Finance's governance will be transferred completely to the community and stakeholder control. Certainly, the future of Nord Finance lies in absolute decentralization.

The admin withholds certain rights with respect to the protocol's working. Therefore the execution of certain rights would constitute:

- The ability to list a new nToken market.
- The ability to update the control fees and reserve ratios as per market needs.
- The ability to update the oracle address in the protocol.
- The ability to withdraw the reserve of a nToken.
- The ability to choose or replace a new admin, such as a DAO controlled by the community. The DAO itself constitutes a new admin; therefore, the administration can evolve over a period of time, based on the guidance of the stakeholders who are ultimate runners of the project and community.

\$NORD Tokenomics & Distributions details :



\$NORD Token Emission Details:

The total supply of Nord Finance is capped at 10,000,000 \$NORD.

Strategic Partners, Early Backers and Public Sale:

2,100,000 \$NORD are allocated to various purchasers, including the early backers, strategic partners, and public sale.

- Tokens allocated to early backers and strategic partners are vested for 12 months. 15% Tokens will be unlocked on the listing date, with the remaining 85% distributed daily from Day 31 onwards for the next 11 months.
- 100,000 \$NORD tokens are allocated as public sale tokens. They are 100% unlocked on the day of listing.

Reward Pool & Ecosystem Funds:

3,500,000 \$NORD is allocated for the community as a reward pool and ecosystem.

- Total reward pool of 1,000,000 \$NORD will be distributed under incentive programs including yield farming, staking and liquidity pools over a period of 12 months
- An additional 2,500,000 \$NORD has been allocated for future community-based platform reward programs and will be disbursed over the course of next 24 months

Nord Foundation:

The Nord Foundation is allocated with 1,500,000 \$NORD token with 24 months vesting. The same will be efficiently utilized for future strategic funding requirements and product development.

Team & Advisors:

2,000,000 \$NORD tokens are allocated to founders & the team who have worked hard to put together the product to reality. The advisors are allocated 500,000 \$NORD with 18 months vesting.

- Team & Advisor Tokens will remain locked for the first 6 months
- The team & advisor tokens will exercise a daily distribution to minimize any concerns relating to bulk token unlocks.
- The daily distribution will begin at the end of the 6th month and continue for 12 months.

The initial circulation supply of \$NORD token will be 714,761, i.e., 7.147% of the total supply. The bifurcation of this involves:

- 314,761 from early-stage inventors
- 100,000 from public sale
- 300,000 for liquidity provision of exchanges
- ~50,000 tokens distributed as part of yield farming and marketing rewards

Token Distribution	Share of Tokens	No. of Tokens	Vesting Period
Total Supply	100.00%	10,000,000	
Seed and Private Sale	21.00%	2,100,000	Vested for 12 months for seed and private sale. 15% Tokens released on listing with daily distribution for balance 85% starting from 31st day for the next 11 months
Public Sale	1.00%	100,000	100% unlocked on listing
Ecosystem & Reward pool	35.00%	3,500,000	Vested for 36 months, allocated for community and reward pools as part of ecosystem incentives to drive adoption
Liquidity Provision	3.00%	300,000	100% unlocked on listing
Foundation	15.00%	1,500,000	Vested for 24 months allocated for future strategic funding needs and development.
Team	20.00%	2,000,000	Vested for 18 months, gradually unlocked at the end of Month 6 with equal daily distribution for the next 12 month
Advisors	5.00%	500,000	Vested for 18 months, gradually unlocked at the end of Month 6 with equal daily distribution for the next 12 month

\$NORD are designed to be consumed/utilised, and that is the goal of the \$NORD distribution. In fact, the project to develop the Nord Finance ecosystem would fail if all \$NORD holders simply held onto their \$NORD and did nothing with it. In particular, it is highlighted that \$NORD: (a) does not have any tangible or physical manifestation, and does not have any intrinsic value (nor does any person make any representation or give any commitment as to its value); (b) is non-refundable and cannot be exchanged for cash (or its equivalent value in any other virtual currency) or any payment obligation by the Foundation, the Distributor or any of their respective affiliates; (c) does not represent or confer on the token holder any right of any form with respect to the Foundation, the Distributor (or any of their respective affiliates), or its revenues or assets, including without limitation any right to receive future dividends, revenue, shares, ownership right or stake, share or security, any voting, distribution, redemption, liquidation, proprietary (including all forms of intellectual property or licence rights), right to receive accounts, financial statements or other financial data, the right to requisition or participate in shareholder meetings, the right to nominate a director, or other financial or legal rights or equivalent rights, or intellectual property rights or any other form of participation in or relating to the Nord Finance ecosystem, the Foundation, the Distributor and/or their service providers; (d) is not intended to represent any rights under a contract for differences or under any other contract the purpose or pretended purpose of which is to secure a profit or avoid a loss; (e) is not intended to be a representation of money (including electronic money), security, commodity, bond, debt instrument, unit in a collective investment scheme or any other kind of financial instrument or investment; (f) is not a loan to the Foundation, the Distributor or any of their respective affiliates, is not intended to represent a debt owed by the Foundation, the Distributor or any of their respective affiliates, and there is no expectation of profit; and (g) does not provide the token holder with any ownership or other interest in the Foundation, the Distributor or any of their respective affiliates.

Notwithstanding the \$NORD distribution, users have no economic or legal right over or beneficial interest in the assets of the Foundation, the Distributor, or any of their affiliates after the token distribution.

RISKS

You acknowledge and agree that there are numerous risks associated with acquiring \$NORD, holding \$NORD, and using \$NORD for participation in the Nord Finance ecosystem. In the worst scenario, this could lead to the loss of all or part of \$NORD held. **IF YOU DECIDE TO ACQUIRE \$NORD, YOU EXPRESSLY ACKNOWLEDGE, ACCEPT AND ASSUME THE FOLLOWING RISKS:**

1. Uncertain Regulations and Enforcement Actions: The regulatory status of \$NORD and distributed ledger technology is unclear or unsettled in many jurisdictions. The regulation of virtual currencies has become a primary target of regulation in all major countries in the world. It is impossible to predict how, when or whether regulatory agencies may apply existing regulations or create new regulations with respect to such technology and its applications, including \$NORD and/or the Nord Finance ecosystem. Regulatory actions could negatively impact \$NORD and/or the Nord Finance ecosystem in various ways. The Foundation, the Distributor (or their respective affiliates) may cease operations in a jurisdiction in the event that regulatory actions, or changes to law or regulation, make it illegal to operate in such jurisdiction, or commercially undesirable to obtain the necessary regulatory approval(s) to operate in such jurisdiction. After consulting with a wide range of legal advisors and continuous analysis of the development and legal structure of virtual currencies, a cautious approach will be applied towards the distribution of \$NORD. Therefore, for the token distribution, the distribution strategy may be constantly adjusted in order to avoid relevant legal risks as much as possible. For the token distribution, the Foundation and the Distributor are working with the specialist blockchain department at Bayfront Law LLC.

2. Inadequate disclosure of information: As at the date hereof, the Nord Finance ecosystem is still under development and its design concepts, consensus mechanisms, algorithms, codes, and other technical details and parameters may be constantly and frequently updated and changed. Although this whitepaper contains the most current information relating to the Nord Finance ecosystem, it is not absolutely complete and may still be adjusted and updated by the Nord finance team from time to time. The Nord finance team has no ability and obligation to keep holders of \$NORD informed of every detail (including development progress and expected milestones) regarding the project to develop the Nord Finance ecosystem, hence insufficient information disclosure is inevitable and reasonable.

3. Competitors: Various types of decentralised applications and networks are emerging at a rapid rate, and the industry is increasingly competitive. It is possible that alternative networks could be established that utilise the same or similar code and protocol underlying \$NORD and/or the Nord Finance ecosystem and attempt to

re-create similar facilities. The Nord Finance ecosystem may be required to compete with these alternative networks, which could negatively impact \$NORD and/or the Nord Finance ecosystem.

4. Failure to develop: There is the risk that the development of the Nord Finance ecosystem will not be executed or implemented as planned, for a variety of reasons, including without limitation the event of a decline in the prices of any digital asset, virtual currency or \$NORD, unforeseen technical difficulties, and shortage of development funds for activities.

5. Security weaknesses: Hackers or other malicious groups or organisations may attempt to interfere with \$NORD and/or the Nord Finance ecosystem in a variety of ways, including, but not limited to, malware attacks, denial of service attacks, consensus-based attacks, Sybil attacks, smurfing and spoofing. Furthermore, there is a risk that a third party or a member of the Foundation, the Distributor or their respective affiliates may intentionally or unintentionally introduce weaknesses into the core infrastructure of \$NORD and/or the Nord Finance ecosystem, which could negatively affect \$NORD and/or the Nord Finance ecosystem.

Further, the future of cryptography and security innovations are highly unpredictable and advances in cryptography, or technical advances (including without limitation development of quantum computing), could present unknown risks to \$NORD and/or the Nord Finance ecosystem by rendering ineffective the cryptographic consensus mechanism that underpins that blockchain protocol.

6. Other risks: In addition, the potential risks briefly mentioned above are not exhaustive and there are other risks (as more particularly set out in the Terms and Conditions) associated with your acquisition of, holding and use of \$NORD, including those that the Foundation or the Distributor cannot anticipate. Such risks may further materialise as unanticipated variations or combinations of the aforementioned risks. You should conduct full due diligence on the Foundation, the Distributor, their respective affiliates, and the Nord finance team, as well as understand the overall framework, mission and vision for the Nord Finance ecosystem prior to acquiring \$NORD.

Reference Links:

1 <https://github.com/ConsenSys/defi-score/blob/master/whitepaper.md>

2 <https://compound.finance/documents/Compound.Whitepaper.pdf>