



Protocol Whitepaper V1

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Abstract

This document describes the basic principles of the concept, implementation, and development of the protocol. Each principle described here is modifiable with continuous improvement and development of the project.

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Introduction

Credit History And Loan

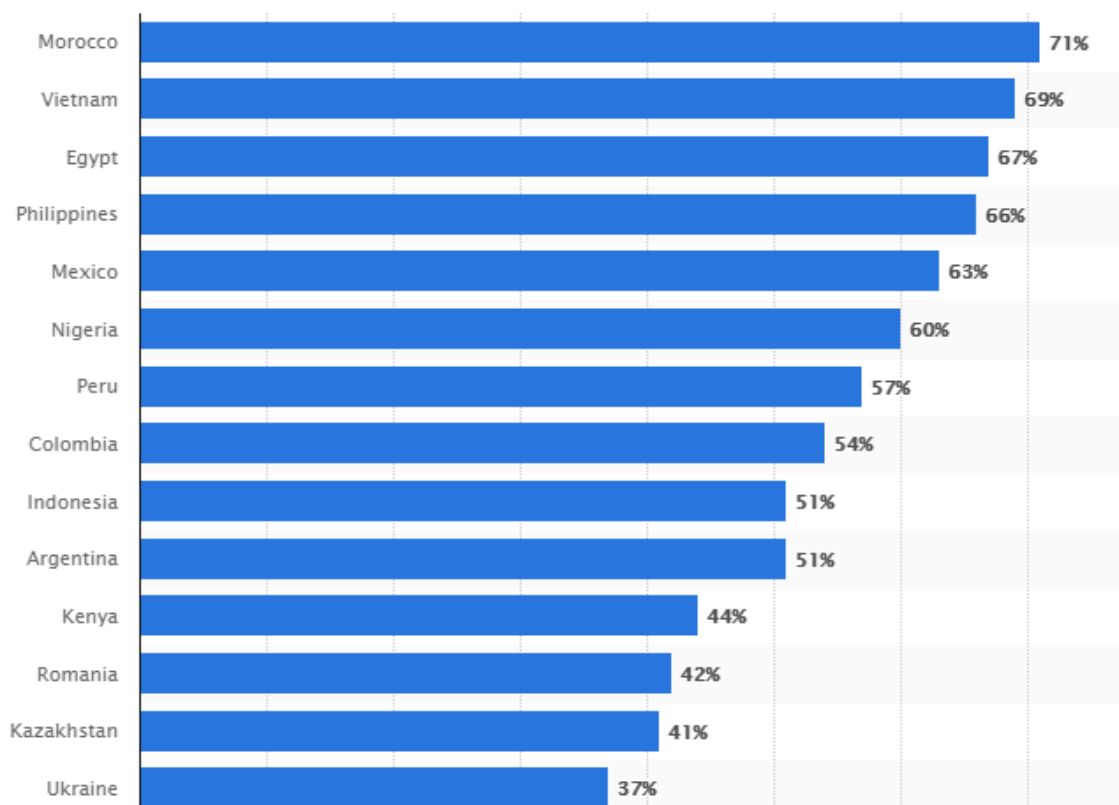
It is not enough to build or develop loan or lending applications, as it has associated risks for borrowers and lenders alike. One of such problems is the creditworthiness, transparency, and accessibility of financial solutions.

While it is a two-sided venture for borrowers and lenders to imbibe, Koryntia finance is proposing a credit-loan DeFi solution for everyone who needs to borrow or lend money, including the underbanked.

Before dissenting our solutions, let's understand the correlations between credit scoring, its history, and loans. According to Vikas Hassija et al, credit scoring is a rigorous statistical analysis carried out by lenders and other third parties to assess an individual's creditworthiness. In other words, every lender does due diligence in knowing the level of risks associated with borrowing to an individual. Although creditworthiness isn't the only lending associated problem, it gives the lender confidence to lend when the lender can verify the credit history using a credit-scoring platform as proposed by Koryntia.

There are also risks of accessibility, opacity, trust, and third-party interference hindering lending between two parties. When there is a reserve to lend, a lender would not be confident to lend to borrowers because there is no trust. Similarly,

lenders and borrowers, especially the underbanked populations, would be denied access to loans. According to Statista, the majority of the population of developing countries as shown in the 2021 [report](#) are unbanked, having little or no access to formal banking.



Thus, it is not right that such a huge percent of the population like Morocco, Egypt, and Nigeria for instance, has 71%, 60%, and 78% respectively, had no access to banking. No access to banks simply means no access to loans and lending. The question now is what we are proposing a p2p lending, DeFi protocol to take.

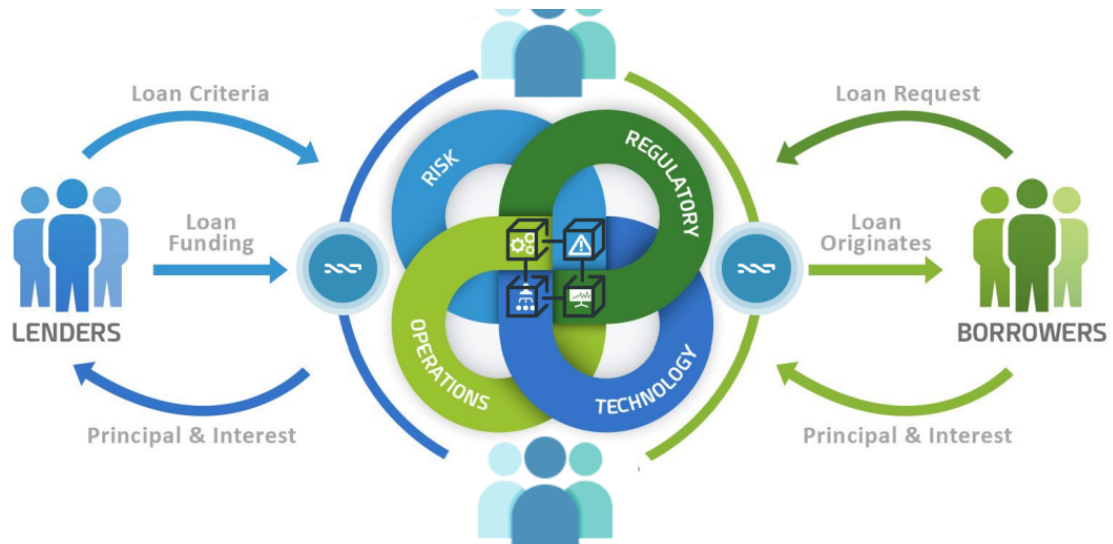
Decentralized Credit Scoring And Loans

Leveraging decentralized ledger technology, lenders, and borrowers can lend and borrow without borders. Unlike traditional banking that queries a centralized system to evaluate the lending risk to give out loans for interest, the blockchain, the leading decentralized ledger first experimented in bitcoin operates a distributed, “decentralized don’t trust but verify” transactional model. It implies that users, borrowers, lenders, and others don’t need to rely on third parties to make lending, borrowing, and risk assessment decisions. Blockchain technology opens up the possibility of peer-to-peer (P2P) loans, complex programmed loans that can approximate a mortgage or syndicated loan structure, and a faster and more secure loan process in general.

When you fill out an application for a bank loan, the bank has to evaluate the risk that you won’t pay them back. They do this by looking at factors like your credit score, debt-to-income ratio, and homeownership status. To get this information, they have to access your credit report provided by one of three major credit agencies: [Experian](#), [TransUnion](#), and [Equifax](#).

Based on that information, banks price the risk of default into the fees and interest collected on loans. This centralized system can be hostile to consumers. The Federal Trade Commission (FTC) estimates that one in five Americans have a “potentially material error” in their credit score that negatively impacts their ability to get a loan. Further, concentrating this sensitive information within three institutions creates a

lot of vulnerability. The September 2017 Equifax hack exposed the credit information of nearly 150M Americans.



Koryntia Finance

Team and Company Profile

Koryntia is run by business leaders, professionals, and developers. It was founded by Gregorio Punzano who is founder and CEO, Entrepreneur with more than 4 experience projects. Leadership, entrepreneurship, and startups. Igor Petrov, CTO & COO, Experience 8+ years in Fintech, IoT, mobile development, software engineering, Cloud Computing, Big Data, and Data Science. Mayur Ghoghari, Senior UI / UX & Graphic Designer and Product Architect, having more than +5 years of experience.

Market Metrics

The unbanked generally comprises the low-income and less educated population of every country. It cuts across underdeveloped as well as developing economies. For instance, Morocco, Vietnam, Egypt, and Mexico topped the recent graph of underbanked. On the global scale, the Middle East and Africa had over 50% of their population excluded from formal financial services while South and Central America, Eastern Europe, and former Soviet republics, Asia Pacific had 38%, 33%, and 24% unbanked, respectively.

In approximate figures, our market is 2 billion unbanked adults and another population that needs better ways of lending and borrowing. The unbanked have little or no access to financial services in a formal institution, including loans and credits. Other interesting stats that encourage the launch of a pool-based peer-to-peer credit-loans protocol is the global debt (TAM), SAM, and SOM which amounts to \$281 Trillion, \$293 Billion, \$88 billion respectively. We believe that enabling credits and loans services that suit the banked and unbanked will not only help actualize the #1, #8 and #10 sustainable development goals, it will also improve other UN agendas while improving international remittance. EY global, a global consulting firm, has estimated that border access banking, savings, and lending could boost emerging and frontier economies' GDP by up to 14% and 30% respectively.

Reinventing Defi Loans And Credits

DeFi, the new financial frontier to achieving trustworthy and borderless open finance, came with so much to offer. Since the invention of bitcoin, DeFi is positioned to reinvent the way people transact, lend, save, and earn interests. DeFi leverages the power of blockchain, a distributed ledger technology that allows timestamp, democratic and transparent transactions to completely reinvent the world's financial systems.

While DeFi opens the gates to decentralized and peer-to-peer savings, rewards, financial assets stability, derivatives, and others, we are tapping from the abundance of the novel technology, the blockchain to revolutionize lending and borrowing for the unbanked and other populations that needed frictionless lending and borrowing.

Also, we are employing the immutability and transparent principles of the blockchain to build a timestamped, transparent, and trustworthy credit-scoring system for lenders and borrowers. Lenders and borrowers instead of regulated by third parties are guided by smart contracts, a set of codes that predefined the roles, agreements, and deals of its users. In his cases, the smart contract spelled out lending and borrowing terms, as well as rates as the need arises. To make lending even more fascinating, DeFi allowed a DApp encoded smart contract where users can transact without boundaries once the terms and details are met.

Pool Strategy And Tokenization Principle

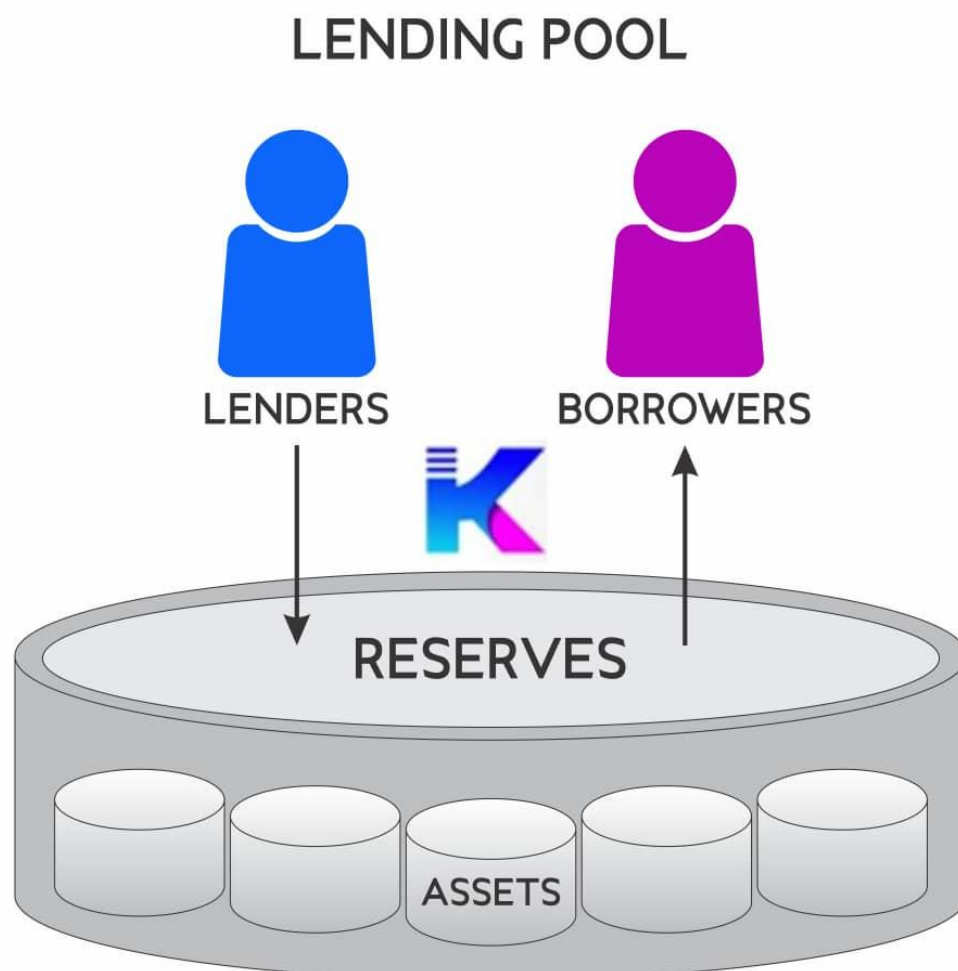
Similar to centralized Cryptocurrency exchanges, the traditional lending systems operate a similitude of an order book model where lenders and borrowers are matched. The pitfalls of this system are that there could be low matching and a lack of liquidity simultaneously. To offset possible occurrences, we are employing a demand and supply-based pool strategy. Lenders pool/deposit funds for interest, while borrowers take loans from the pool to pay a certain interest. Lenders deposit funds using supported tokens or our native token to earn some interest in the form of an interesting token. Similarly, borrowers pay certain interest to obtain a loan from the pooled funds as needed. The individual can choose a borrowing pair, pegged 1:1 of the \$Kotya, Koryntia native token.

Koryntia lending pools are decentralized peer-to-peer pools for lenders and borrowers. However, we operate a credit score to ensure the safety of lenders and borrowers alike. Users have to meet the Koryntia credit score to take loans, although it is decentralized and self-regulated by smart contracts. On the other hand, lenders' funds are tokenized 1:1 of the native token. For instance, when a lender deposits say \$10,000 in the Koryntia pool, it is calculated in a 1:1 ratio of the native token. Similarly, the interest is calculated as such based on the supply and demand forces.

The tokenization token is a derivative token pegged to the underlying asset of lenders' liquidity. For instance, in the previous example, a lender who lends say \$10,000 in DAI, or USDT receives a corresponding derivative token, \$Kotya which can be sold or swapped on the swapping contract as well as secondary marketplaces. The pooled fund tokenization strategy is to allow users to profit off the token since it is

subject to market forces. As such, its value, similar to other markets, increases as the demand rises and borrowers seek loans. To arrive at this, the derivative token, \$Kotya contract defines the balance, redirected address, inflation, interest per token, period, and other concepts.

There are several pools for different underlying assets. Lenders can decide to deposit/pool funds using USDC, USDT, BAT, and so on. Whatever the lender chooses, the lender receives an equivalent interest/derivative token. Similarly, borrowers are at liberty to borrow from any pool, otherwise known as reserve.



Koryntia Architecture

Koryntia finance comprises several key points. They include:

Koryntia Interface

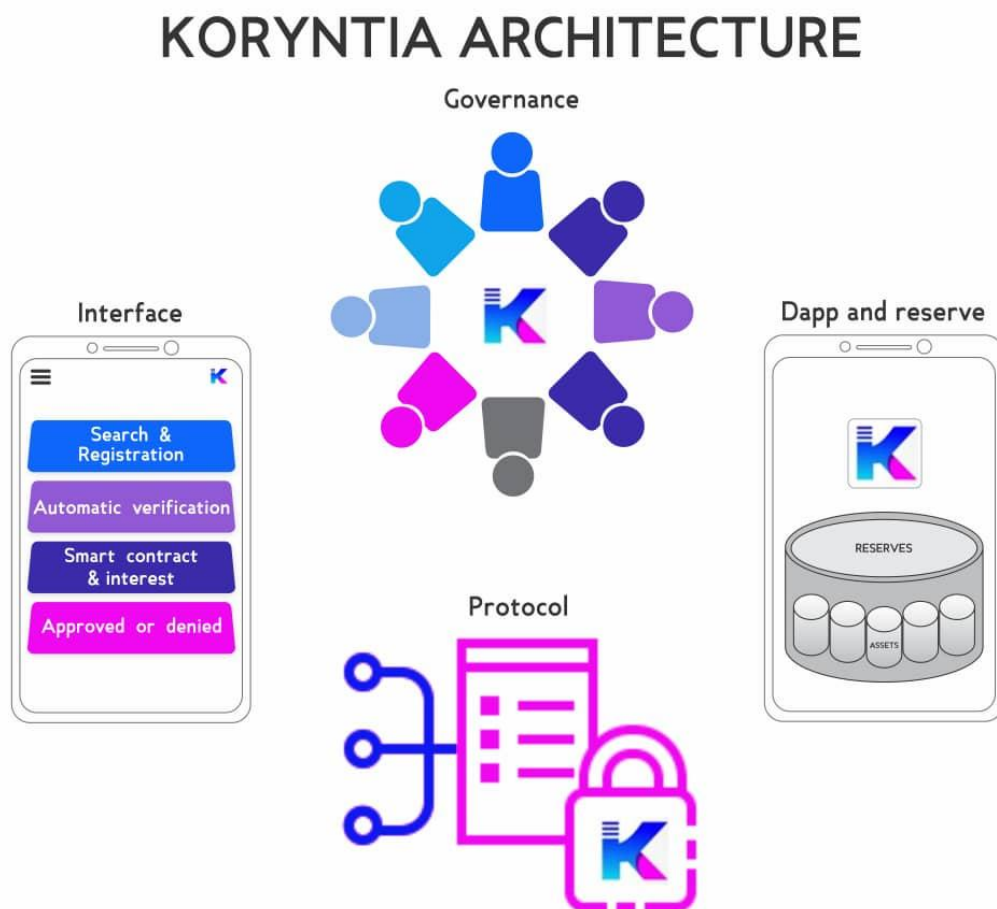
This is a web interface that will be aligned with Web3, and the Koryntia Dapp will allow easy interaction with the Koryntia protocol. It is one of the many ways for users to interact with the Koryntia protocol, which includes a launchpad and a loan interface that allows users to have access to loans and other Koryntia products. Similarly, the user interface provides details of the pools/reserve and launchpads for lenders to deposit funds. User's journey on the User Interface is simplified. It includes:

1. Search and registration. The user (lender or browser) who wants to lend, borrow, withdraw or swap tokens or funds upon access to the easy-to-use user interface searches for pools to deposit (for lenders) or pools to take loans (borrowers). When the individual has decided on the pool to supply liquidity or loan to take, the next is to register and continue the process as shown on the app.
2. Automatic verification. After registration, the user's details are verified to further confirm the know your customer process. This helps to document and protect users against fraud and to allow the platform to operate within the legal framework of the jurisdiction. However, this data will by no means be exploited as it is confidential and for verification purposes alone.
3. Smart contract and interest. Depending on the user; lender or borrower, the smart contract lend or borrow function is activated to allow the user to lend

or take loans without boundaries. It is the smart contract at backend that determines the interest rate, slippage, and other calls, depending on the amount supplied or borrowed, period, pools and credit scores.

4. Approved or denied. After the backend smart contract loan and lending calls, the user interface process with the loan decision. This decision could be both ways; approved or denied, but they are all functions of the user's data and not manipulated by third parties.

Users can check interest, profits, funding, credit score, and others on the ease to use user interface as shown below.



Koryntia Governance

Koryntia will be operating multiple pools with time, but will start with the \$Kotya Pool that serves as the reserve for \$Kotya collateralized pooled tokens. While the \$Kotya token will integrate other pools and will allow users to create and run a liquidity pool, the \$Kotya token will serve as the governance for all the pools. It gives voting rights at the protocol and pool levels, helping to secure the network as well as allowing its holders to join the community democratic processes.

Koryntia DApp And Reserve

Koryntia operates a decentralized application called Koryntia DApp that allows lenders and borrowers to lend and borrow without a third party. Users simply connect wallets to swap, lend, borrow, withdraw and so many other financial obligations. From the user interface, users can connect to any pool, or connect to provide liquidity at ease.

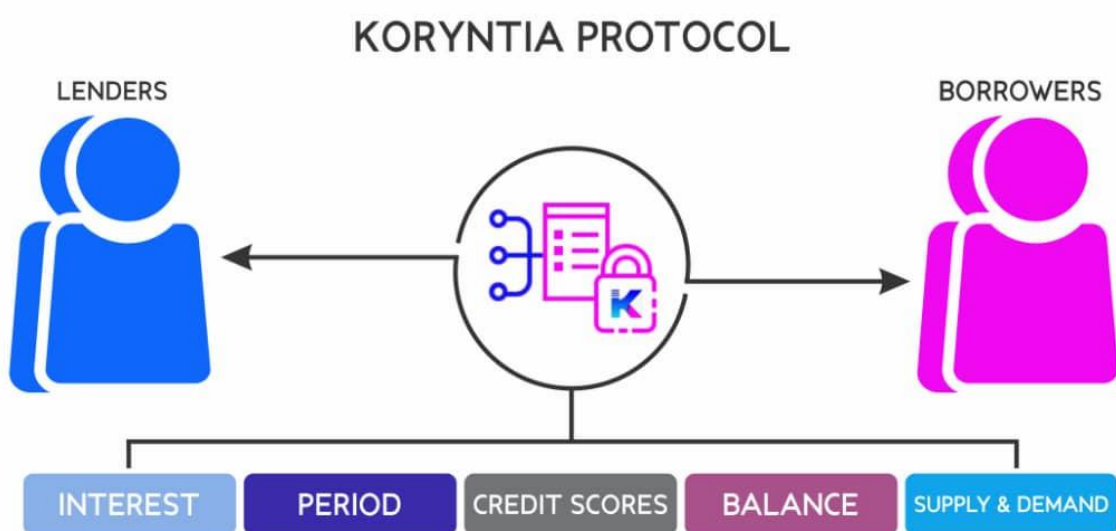
Koryntia Protocol

Koryntia Smart Contract-Based Credit And Loan

The Koryntia smart contract defines the terms of credits and loans. Similar to every other ERC20 token, it leverages the Ethereum solidity to define calls and actionable terms for borrowers and lenders to follow.

As the central logic that guides the protocols and the various pools/reserves, it holds the state of every reserve, indexes such as interest, period, credit scores, balance, supply and demand, and many others necessary to allow users to borrow and obtain a loan seamlessly.

The smart contract also makes data collection and credit scoring timestamped such that credit scores can be verified.



\$KOTYA Token

It is the Koryntia native token that is used to reward liquidity providers for supply and running a pool. It is an ERC20 compliant token that serves as a guarantee, reward and governance token for the protocol and groups. When a lender/liquidity provider supplies liquidity with any supported assets, the individual is rewarded with a \$Kotya token in equivalence of the supplied funds, as the token is pegged 1:1 of the supply assets.

Also, depending on the contract, the lender earns accrued interest in \$Kotya while the borrower pays interest as predetermined in that smart contract. The price of the token varies, but is subject to the force of demand and supply of funds as well as the inflation index of the native network, Ethereum.

Conclusion

Koryntia Finance is a fully automated pool-based DeFi lending platform. The aim is not only to revolutionize finance but to allow everyone, banked and unbanked, to access financial services including loans, lending, credit score, and other products. Thanks to the blockchain that allows the deployment of the various Koryntia lending and borrowing smart contracts. It regards lenders a governance token, \$Kotya for adding liquidity to the reserve.

First, it starts with the primary pool, \$Kotya pool before integrating other pools, governed by the Koryntia smart contract. Users can have access to loans and lending by the click of a button on the Koryntia user interface.