The Egoras Protocol: A Governance Protocol for Decentralized Microfinance.

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Abstract

It is estimated that over two billion people around theglobe are unbanked and without any access to financial services to meet their daily needs. Egoras protocol ("the protocol" or "the project") attempts to be part of the solution to this problem by expanding financial access and inclusion to unserved or underserved communities. The protocol achieves its mission by on chain Governance and a Self-Funding Treasury system. The protocol serves as a source of capital for the unserved or underserved communities. In addition, the project seeks to improve the quality of financial services as well as lower the cost of the services in these communities around the globe. This whitepaper therefore explores how Egoras protocol can solve real life problems such as helping people start businesses, supporting small and medium sized enterprises access funds for expansion; and enabling families attend to the needs while maintaining good collateralization onchain.

1. Introduction

It was thought that the advent of microfinance in the 1970s and 1980s would eradicate or drastically reduce the pervading poverty at the time. However, four decades intothe pioneering work of Mohammad Yunus in Bangladesh and the establishment of the Grameen Bank in 1983, the goals of microfinance have not been met.

Without doubt, there are several barriers to the financial success of microfinance organization when compared to other financial organizations or mainstream banks. The first is higher interest rate. It is generally acknowledged that most microfinance institutions charge a very high rate of interest when compared to commercial banks. This is usually at the detriment of the borrowers with the attendant consequences such as depression and even suicide. Secondly, there appears to be overdependence of microfinance organization on the prevailing banking System. This is because most microfinance institutions operate as Non-Governmental Organizations (NGOs), and they are reliant on financial institutions such as commercial banks for stabilized funding to carry out their own lending activities. This overdependence of microfinance institution on banks makes them incompetent as a lending partner. Finally, there is the problem of over-indebtedness. Notably, microfinance sector gives loans without collateral, and this increases the risk of bad debts.

Egoras microfinance protocol seeks to address the challenges identified above. Addressing the challenges would mean that loans should be given at a very low interest when compared to mainstream banks, and collaterals should be required to get the loans. This also means a microfinance

institution not dependent of mainstream banks. To solve the high interest rate problem,Egoras protocol introduces onchain governance where the interest rates are determined by the people, in which no central body or companyfixes the interest. In other words, the users determine the interest rate. To address dependence issue, the Egoras protocol uses an onchain treasury system to make sure that Egoras protocol doesn't lack the funds or liquidity for the loans and these funds are governed by the people. Finally, the Egoras protocol introduces collateral lending to address over-indebtedness in microfinance sector. In this regard, small businesses' assets will be converted to non-fungible tokens and they represent the collateral. These assets will be sold off when the borrower defaults in repaying the loan.

2. Decentralized Autonomous Organization

As noted earlier, one of the biggest barriers in the microfinance sector is the high interest rate which is very high when compared with mainstream banks. For any microfinance institution to achieve its purpose then interest rate should be very low. The best way to achieve this is to give the power back to the people, whereby users can vote to increase or reduce the interest rate and they are also incentivized as they participate in these processes.

In a decentralized autonomous organization, no company fixes outrageous interest or declines loan requests. The users vote the interest rate of their choice and the also vote in the approval and declining of loans. Whereas the current microfinance space is managed by NGOs, microfinance banks, or individuals and regulated by the government,the whole process on Egorasprotocol is governed by the people. No third party makes the decisions and all data are secured on Egorassmart contract which is built on the Ethereum blockchain. Egoras protocol is not owned by any

foundation nor any firm. It is a decentralized organization governed by the people.

2.1. Lending Partner Approval Governance

Microfinance banks, NGOs or any lending firm can validate collaterals and work with Egorasto distribute the loans to small businesses or any borrower that wants to borrow funds from Egoras. These microfinance banks or organizations are curated by the people and people get to decide which organization can get access to Egoras treasury system.

When a user requires a loan, the user will contact a microfinance bank or organization that have been approved by Egoras token holders to validate collaterals and post loans. This organization validates the user's collaterals and convert them to non-fungible token (NFTs). The ownership of these non-fungible are transferred to Egoras protocol before the loans can be uploaded on Egorasmicrofinance smart contract. The kind of business and the purposes of the loans are also uploaded by the validating organizations.

2.2.Loan Approval Governance

It is to be noted that the current microfinance sector managed by NGOs and microfinance bank approve loans for borrowers after proper due diligence have been carried out; but the Egoras protocol uses a crowd sourced knowledge to approve or decline loans. The people vote if the loans should be approved or declined and the people also share in the risk of the loans.

Egoras holders approve or decline any loan within 72hrs of such loan request. In other words, the governance process to approve or decline any

loan takes up to 72hrs. All data are provided for Egorasholders to make the correct governance decisions and the votes are determined by the voting weight (vote weight is determined by the amount of Egorastoken locked in the governance process).

Egoras holders share in the risk of the loans and they are rewarded for their participation in the governance process by receiving all interest accruing from the loans. They also share in the risk of the borrower's default in making repayment by getting absolutely no interest for their participation in the governance process.

2.3 Interest Rate Governance

The interest rate is properly governed by people (Egoras holders) and no organization or bank determines the interest rate attached to any particular loan. The interest rate governance is also used in the stabilization of NGNC stablecoin. When NGNC is going lower than the pegged price(1NGNC= 1NGN), Egoras holders will vote on the increment of the interest rate. On the other hand, when the NGNC stable coin is going higher than the pegged price then Egorasholders will vote on the decrement of the interest rate.

The microfinance banks or NGOs approved by Egoras holders borrow directly from the Egorasmicrofinance protocol to lend to their users at a lower interest rate (Central Bank Rate) and these will reduce the dependency of microfinance banks and NGOs on commercial banks and private institutions.

2.4. Interest sharing formula

When a borrower pays back the loan to microfinance banks, NGOs or to any Egoras lending partner, the cash is converted to NGNC and used to buy back on Egoras microfinance protocol and the NGNC which is paid back will be destroyed and removed from circulation forever. Theinterest gotten from the loan will be deposited on the Egorastreasury and later distributed among Egorasholders. This is one of the ways the treasury is capitalized.

3.0 Egoras Treasury

Egoras treasury is a pool of funds collected through interest and staking rewards. These funds are saved in the smart contract for marketing, development, reserve funds for the NGNC stablecoin, payment of the team and others.Spending proposals could be made for a chance to withdraw some funds from the treasury and if the proposal is approved by the Egorasholders, the funds will automatically be withdrawn.

Egoras treasury funding allows for a viable long-term model that will grow the technology and the community. In combination with self-funding, a strong governance model allows Egoras microfinance protocol to avoid the pitfalls and amplify the successes of its predecessors — making community-driven decisions that will maximize scalability and drive global adoption

3.1 Block Rewards

5 millionEgoras Token ("EGR) will be released every month and will be divided between the Egoras Treasury and voters. The breakdown of the allocations can be viewed below:

- 80% to the Egoras Treasury
- 10% to the Egoras voters

The voters are the backbone of Egorasmicrofinance protocol, they approve/decline loan request from microfinance banks or NGOs and these activities attract 10% of the total block rewards weekly.

3.2 How is the Treasury capitalized?

The Egoras microfinance protocol holds the collateral tokens (the digital assets represented as NFTs and the digital assets) that back the NGN Coin in smart contracts. When new NGN Coin are created, the assets used by the borrower to create the debt are placed into these smart contracts to be held as collateral. This process keeps the NGN Coin over collateralised even as supply increases.

At the launch of the project, the 80 billion EGR tokens are sent to Egorasmicrofinance protocol and this may result to overcollateralization greater than 170%.Up to 80% of the weekly block reward created through the inflationary money are sent to the treasury to further increase the capitalisation of the treasury.

4. Overcollatarisation

Simply put, collateralization is the use of a valuable asset to secure a loan. If the borrower defaults on the loan, the lender may seize the asset and sell it to offset the loss.Over Collaterization(OC) is the provision of collateral that is worth more than enough to cover potential losses in cases of a failure to meet an obligated time or a default.Therefore,OCloans are loans of which their collateralis worth more than the amount taken as loan.

NGNC is generated, backed, and kept stable through collateral assets that are deposited into Egoras treasury on the Egorasmicrofinance protocol. A collateral asset is a liquid physical asset represented as non-fungible tokens

on Ethereum blockchain that EGR holders have voted to back the loans on Egorasmicrofinance protocol.

To generate NGN Coin, the Egorasmicrofinance protocol accepts the loan posted by the microfinance bank or NGOs and physical assets that back these loans are approved by EGR holders. EGR holders must also approve these organizations first before they can upload a loan on Egoras protocol.These and other decisions of EGR holders are made through the Egoras decentralized governance process.

4.1 Retrieval of the Loans

Egoras protocol addresses the issue of over indebtedness in microfinance sector, through conversion of business assets into non-fungible tokens which represent the collateral. These assets will be sold off if there be any default in repaying the loan.

In Egoras protocol, loans are paid back daily, weekly or monthly depending on the agreement made with the borrower. When the loans are paid back in fiat money, it will be converted into NGNC by the microfinance banks or lending institutions.

The partnering organization then pays the funds (NGNC) back to Egoras protocol and the NGNC which is paid back is destroyed and taken out of circulation while the interest accrued is taken out of circulation.

4.2 Liquidation of Assets

Liquidation of asset is the conversion of assets inorder to pay back the debtaccrued; and this is done by selling the assets on the open market.

These collaterals are the assets backing the loans. After adequate studying of the asset presented by the borrower, the loan request with its feasibility findings and an evaluation of the asset presented to the microfinance banks and Egoraslending partners, the loans would be uploaded on the smart contract of Egorasmicrofinance protocol for voting and approval.

When the borrower defaults in paying back the loan, the microfinance banks or NGOs sell off these assets presented by the defaulted borrower to offset the accrued debt.

5. Token Economy

The Egoras Protocol interacts with Four kinds of tokens:

1. The NGN Coin (NGNC) - a stable cryptocurrency that can be held and spent like Nigeria Naira and other stable fiat money.

2. The Egoras token (EGR)—a governance cryptocurrency used to govern Egorasmicrofinance protocol andto facilitate the stability of the NGN Coin.

3. The IFX24 token (IFX24)- next-generation Gastoken that allows users to significantly save on Ethereum gas fees on Egorasmicrofinance protocol.

4. Collateral tokens— physical assets represented as NFTs and digital assets that are held in smart contracts in order to back the value of the NGN Coin. This is similar to when the US government used to back the US dollar with gold. The protocol is designed to hold collateral tokens worth at least 170% of the value of all Reserve tokens. Many of the collateral tokens will be tokenized real-world assets such as Land, inventories, vehicles and others.

The NGN Coin (NGNC)

The NGN Coin is a decentralized, collateral-backed cryptocurrency pegged to Nigerian naira. NGN Coin is built on Ethereum blockchain and can be held on any support Ethereum wallet. It can be spent the way the Nigeria Naira is spent.

Microfinance banks and NGOs generate NGN Coin by posting a loan backed by collateral assets into the Egorasmicrofinance protocol and EGR holders approve or decline the loan request.The loan request approved creates NGN Coin which the microfinance banks sends directly to the borrowers. Users can also buy NGN Coin from exchanges, or simplyreceive it as a means of payment.

Every NGN Coin in circulation is overcollatarised, meaning that the value of the collateral is higher than the value of the NGN Coin debt, and all NGN Coin transactions are publicly viewable on the Ethereum blockchain.

Functions of NGN Coin

1. Store of value

Stablecoins keep or preserve values over a longperiod because of the lower associated volatility levels.NGN Coin is a store of value, so it is designed to preserves value for a long period of time.

2. Medium of Exchange

Stablecoins enable further adoption of cryptocurrencies by the local businesses while minimizing the risks related to their volatility. It encourages exchange of goods for cryptocurrency. NGN Coin will be used by Nigerian small business in exchange of goods and services.

3. Unit of Account

Pricing in NGN Coin is possible with the pegging mechanism. Currently NGNC is not an independent unit of account over time across the globe. NGN Coin is currently pegged to 1 NGN (1 NGNC =1 NGN)**.**Though NGNC is not used as a standard measurement of value in the off-chain world, it functions as a unit of account within the Egorasmicrofinance protocol.

4. Lending

NGN Coin can be used to settle debt in Egorasmicrofinance protocol. (e.g., Microfinance Banks, NGOs or Egoras lending partners pays back debt and interest with NGNC on Egorasmicrofinance protocol).

Steps to Interacting withEgorasMicrofinance Protocol as a Microfinance Banks, NGOs and Money Lenders

- **Step 1. Create Partnership Request**

Any legally registered microfinance bank or NGOs can create a partnership request on Egoras microfinance protocol by filling the partnership form with all the detailed information about the organization.

- **Step 2. Get approved/declined by EGR holders**

Egoras token (EGR) holders curate the request of microfinance banks, NGOs or Money Lenders to become a lending partner, they decide if they will either approve or decline the request from the organizations.

- **Step 3. Post your loan request**

Approved microfinance banks or NGOs can post loan request to Egoras microfinance protocol and get EGR holders either approve or decline the

loans. If the loans are approved, then the organization receives NGN Coin in their approved organizational wallets.

- **Step 4. Pay Back the Debt**

To retrieve the collateral of the borrower, the microfinance banks or NGOs must pay down or completely pay back the NGN Coin she generated, plus the interest fee that continuously accrues on the outstanding debt.

Steps to Interacting with Egoras Microfinance Protocol as EGR holder

- **Step 1. Validate Microfinance bank partnership request**

Approve/decline partnership request of microfinance banks, NGOs or organizations with money lenders license. Read through the documents provided by these organizations before approving or declining the requests.

- **Step 2. Validate the Loan request**

Read through the loan request by these organizations; ask the lending team questions in order to get to know the borrower before approving/declining the loanrequest.

- **Step 3. Claim your rewards**

Claim your weekly rewards from Egorasmicrofinance protocol. The rewards are of two types

i. Block rewards created through inflationary monetary policy and

ii. Interest accrued from debt from businesses holding NGNC

The Egoras token (EGR)

It is the governance token of the Egorasmicrofinance protocol; it allows people who hold it to vote on changes to the Egoras microfinance protocol. It is also required to submit proposal to Egorasmicrofinance protocol. It can also be used to facilitate the stability of NGN Coin.

The IFX24 token (IFX24)

IFX24 is a next-generation Gastoken that allows users to significantly save on Ethereum gas fees on Egorasmicrofinance protocol.IFX24 token is a new, cutting-edge Ethereum contract that allows users to tokenize gas on the Ethereum network, storing gas when it is cheap and using/deploying this gas when it is expensive. Using IFX24 Gastoken can subsidize high gas prices on transactions on Egoras Microfinance protocol.

What is Gas?

Gas is a fundamental resource in the Ethereum network. Every transaction on the network must include some gas, and the fee paid to miners for each transaction is directly proportional to the gas consumed by a transaction.IFX24 Gastoken allows a transaction to do the same amount of work and pay for less gas, saving on miner fees and costs and allowing users to bid higher gas prices without paying correspondingly higher fees. Using IFX24 Gastoken on an eligible transaction, you can save money on the Ethereum network today when using Egoras protocol.