OKF

OK FLOURISH

THE FLOURISH PROTOCOL - A WHITE PAPER

INDEX

1. Executive Summary

The stable coin landscape is dominated by USDT and USDC, which are pegged to the US Dollar and are not entirely decentralized. The USDC has a market cap of over 44.2 billion and USDT over 78.4 billion respectively and together they strengthen the US economy despite the fact that high trade volumes and transactions come from countries like Kenya and Nigeria (CoinMarketCap, 2022).

In May 2021, Nigeria accounted for a trade volume of about 2.4 billion US Dollars in the crypto space (The Guardian, 2021). On the other hand, Kenya, which happens to be one of the early adopters of peer-to-peer cryptocurrency transactions ranks No.1 for the total value of peer-to-peer transactions (CoinGeek, 2021). Despite their contributions, the fiat currencies of these countries are not receiving equal representation in the stable coin landscape, nor is their economy benefiting from their respective fiat currencies being held as reserves, which is very much the case with the US Dollar.

The current stable coin model does not serve the purpose because it is neither decentralized nor does it have a global appeal. It largely relies on the US Dollar as a peg despite the fact that it has no intrinsic value and is solely backed by the word of the US government and that is not something the rest of the world should be expected to rely on. It is worth noting that in the 1960s, the US Dollar ceased to be redeemable against gold, silver, or any other commodity (The Federal Reserve, 2021). This is why the Flourish Protocol aims at creating country-specific stable coins that are pegged to the local currencies and strengthen the respective economy through segregated treasury management.

The US Dollar continues to be the peg for most mainstream stable coins like Tether, USDC, DAI, BUSD, and several others despite the fact that the Swiss Franc is the most stable currency in the world. While the world's strongest currency is the Kuwaiti Dinar followed by the Bahrain Dinar, Oman Rial, Jordan Dinar which are much stronger in value than Western Currencies like the US Dollar and The British Pound (Clacified, 2021). This highlights the absence of equal representation and the most neglected are the smaller economies which have greatly contributed to the overall growth of the crypto industry.

In May 2021, Nigeria accounted for a trade volume of about 2.4 billion US Dollars in the crypto market, which is the highest after the US and this is bound to increase once the government relaxes the restrictions imposed on cryptocurrencies (The Guardian, 2021).

Kenya, which is one of the early adopters of the peer-to-peer cryptocurrency transfer now leads the world with the highest number of transactions of digital assets (CoinGeek, 2021). In 2021, this nation contributed to 880% growth in the crypto marketplace (CryptoSlate, 2021).

In 2021, WazirX, the India-based affiliate of the Binance Cryptocurrency Exchange registered an annual trade volume of $43 billion US Dollars (CoinDesk, 2021).

Bank of Russia estimates that over 5 billion US Dollars or 350 billion Rubles worth cryptocurrencies are transacted each year in Russia (Coin Telegraph, 2021).

The Flourish Protocol is focused on eliminating dependencies involved in the creation of stable coins, which is very much the case when protocols like Liquid are used. On the other hand, using other protocols like Maker and Synthetix make the entire process complex due to the logistics involved. Therefore, the Flourish protocol leverages the OK Chain which is designed for speed and cost-efficiency.

Globalization has propelled international transactions but carrying them out through fiat currencies can be slow, expensive, and inefficient. As that needs to be done through centralized institutions, it involves high transaction fees. For instance, procuring US Dollars in Kenya can be difficult and requires a lot of compliance — reasons why Kenya has the highest peer-to-peer cryptocurrency transactions despite the regulatory deadlock.

A similar situation exists in other nations too where the only option is an intermediary like PayPal which is overly expensive. For instance, the PayPal transfers in Kenya cost up to 5% with a minimum of $0.99 and a maximum of $4.99 per transaction (LivingInNairobi, 2021). A 0.99 US dollar would be around 112.3 Kenyan Shilling which is quite high for a single transaction.

Coins like Basis Cash and Iron Titan which plummeted from $60 to under a cent in June, 2021 were under-collateralized and faced liquidity issues (CNBC, 2021). That was due to the absence of a well-defined governance protocol which the Flourish protocol overcomes through Standard Liquidity Providers, Over-collateralization, and a structured redistribution and reward mechanism.

The Flourish protocol lays the foundation for currencies of smaller countries to be used as pegs which empowers other economies whose currencies would also be held as reserves. At present, there are about 73.32 billion USDT and 46.41 billion USDC in circulating supply. So, at 1:1 ratio, these two stable coins account for about $119.73 billion US Dollars as reserve (CoinMarketCap, 2022). Also, yield farming, lending, and borrowing protocols like Compound, Debank, AAVE, etc... are largely USD-centric but Flourish aims at changing that and bringing more visibility to smaller economies.

The Flourish Protocol is a massive improvement over several fiat and crypto currencies. With innovative protocols, the platform eliminates common concerns such as collateralization, liquidity, and more. In the case of Fiat currencies, it is a known fact that none of them are redeemable against any valuable commodity. This practice ended in the US in the 1960s when three decades after giving up on gold reserves, the nation also gave up on silver and is now not redeemable against any bullion or commodity, which means it has no intrinsic value (The Federal Reserve, 2021).

Except for MakerDAO, no platform allows the borrowers to retain the ownership of their collateral used for minting stable coins. Although Maker allows this, it collects interest on every DAI which again makes the entire process expensive. That is not the case with the Flourish protocol which not only allows borrowers to retain ownership of their collateral, but also lets them mint without having to pay any interest.

Flourish is an over-collateralized protocol, which is designed to be resilient against market volatility. The crypto markets need such a hedge because of the sharp swings. In 2017, presumably the most stable cryptocurrency Ethereum collapsed from $319 to 10 cents (CNBC, 2017). Likewise, in 2019, it fell from over a thousand dollars to under a hundred dollars. As the same could happen to the whitelisted collaterals accepted by the Flourish protocol, the platform aims at being over-collateralized.

2. INTRODUCTION

For decades, the US Dollar has dominated the money market and has been used as a yardstick to measure the strength and stability of other fiat currencies. This is not because the US Dollar is the most valuable, because that pedestal has long since belonged to the Kuwaiti Dinar. In fact, there are several currencies like the Bahrain Dinar, Oman Rial, Jordan Dinar which are much more valuable than the US Dollar and The British Pound (Clacified, 2021). Yet, the US Dollar has remained a reliable yardstick because of its controlled supply which accords stability to it.

This reliance was placed largely due to the US Dollar's stability and that seemed alright until the 1960s when the currency was redeemable against Bullion, but then that practice was discontinued (The Federal Reserve, 2021). In fact, none of the present-day fiat currencies are backed by gold or any other type of valuable commodity which means they have no real intrinsic value and are solely representative of the respective government's promise.

For this reason, the world of decentralized finance and particularly, the stable coins evolved. As a matter of fact, one of the core objectives of the blockchain industry is to create an inclusive economy, but that was hindered to an extent by the monopolization of stable coins like the USDT and USDC which are pegged to the US dollar — as of today, the USDC has a market cap of over 44.2 billion and USDT over 78.4 billion respectively (CoinMarketCap, 2022). Unfortunately, they strengthen the peg because for each stable coin minted, the peg is held as reserve and deposited in the treasury.

To change the status quo and to lay the foundation for equal representation in the world of stable coins, the Flourish Protocol was developed. The purpose of stable coins was to act as a store of value and to protect the holders against market volatility but in doing so, it ended up strengthening one particular fiat currency, the US Dollar. So, for quite some time the world of Decentralized Finance has revolved around the US

Dollar, but it is time to start an era of equal representation. The Flourish Protocol aims at doing precisely that by laying down the framework for equal representation of all currencies. With this, lower economies will no longer be excluded from the crypto race and will have a strong presence like the developed ones.

As an over-collateralized, decentralized capital-efficient stable coin protocol for personal finance, the Flourish Protocol aims at ensuring an inclusive environment, particularly for the smaller economies, often labeled as third-world countries. With a calibrated approach, the project makes use of liquidity providers and a strategically structured protocol to ensure full convertibility between stable assets and collateral without the borrowers losing out their ownership rights. As a result, it would facilitate swapping of collateral against stable assets, and stable assets against collateral — at oracle value but without the loss of ownership and in an interest-free ecosystem.

The Road Ahead

The Flourish Protocol was designed to enable the issuance of stable coins pegged to literally any fiat currency in the world. It would open the doors to limitless possibilities and that would start with the launch of a stable Naira Coin (NGNC) on the mainnet. That would result in the first liquid stable coin that is backed by Crypto, but it does not end there.

The goal of Flourish Protocol is to create stable coins for almost all Forex currencies, especially for economies that have little or no access to decentralized finance. Also, to provide an investment avenue for those who live in countries where cryptocurrencies are either restricted or banned. For instance, countries like Bangladesh, Morocco, Egypt, Nepal, and certain others have entirely banned cryptocurrencies (Investopedia, 2021).

These countries have crypto enthusiasts who need an avenue to invest in cryptocurrencies and that is precisely what the Flourish Protocol aims at facilitating. In this whitepaper, we shall elaborately discuss the need for equal representation and how the Flourish Protocol aims at facilitating that through its highly structured protocol. Furthermore, the noble mission of this project is backed with high potential that shall be demonstrated with facts and figures.

3. NEED FOR FLOURISH PROTOCOL

Over the past decade, the decentralized finance landscape has emerged as a strong alternative for centralized institutions like banks, money exchangers, lenders, etc... Due to its many benefits, the cryptocurrency market has expanded exponentially and empowered seamless international transactions. The widespread acceptance of this industry has contributed to the spike in the demand for digital assets, particularly the stable coins, which are now a popular medium of exchange.

As their value is pegged to an external asset like a fiat currency, they are one of the most stable crypto asset classes. Therefore, Traders and other crypto enthusiasts use them as a hedge against the sharp upward and downward movements which are rampant in the crypto market. Their stability comes from the peg that the stable coin uses, which is usually a fiat currency — predominantly, the US Dollar. Apparently, the US Dollar is used as a peg by some of the most popular stable coins like Tether, USDC, DAI, BUSD, and several others even though it is neither the strongest nor the most stable currency in the world.

While the Kuwaiti Dinar is the strongest, the Swiss Franc has a reputation for being the most stable currency in the world. Yet, the US Dollar continues to be the most popular peg and this needs to change. Else, this widespread adoption could end up strengthening the currency of a particular nation. As one peg's equivalent is deposited in the treasury for every stable coin minted, the reserve supports and strengthens that peg.

The Flourish Protocol aims at driving that change by enabling the use of other fiat currencies as pegs, particularly those representing developing nations. This is a much-needed change for the cryptocurrency markets to remain a decentralized global marketplace. In fact, smaller nations that have greatly contributed to the growth of this industry deserve equal representation. Let us now delve deeper into how the smaller economies have contributed to the overall growth of the crypto market and why this transformation is essential.

A Snapshot of Crypto Trading in Smaller Economies

Nigeria

Despite the fact that 1 USD is equal to about 414.5 Nigerian Naira, this nation has the second highest cryptocurrency trade volume in the world. In May 2021, Nigeria traded over 2.4 billion US Dollars despite the government's restrictions (The Guardian, 2021). According to experts, it is hard to procure US Dollars in Nigeria, a reason why Nigerians have been using cryptocurrencies for cross-border exchanges despite the official disapproval (Reuters, 2021).

Kenya

Known to be an early adopter of cryptocurrencies, this East African country now leads the pack when it comes to peer-to-peer transfer of digital currencies. It ranks before the US, China, Brazil, and other early adopters of cryptocurrency (CoinGeek, 2021). In fact, in the year 2021, Kenya reportedly led 880% of the global crypto market growth (CryptoSlate, 2021).

India

Despite the regulatory deadlock, WazirX, an affiliate of the Binance Cryptocurrency Exchange is witnessing tremendous growth and registered an annual trade volume of $43 billion US Dollars in 2021 (CoinDesk, 2021).

Russia

Although the Bank of Russia remains skeptical about Bitcoin, the Russian central bank estimates that over 5 billion US Dollars or 350 billion Rubles worth cryptocurrencies are transacted each year in Russia (Coin Telegraph, 2021). From the above mentioned, it is clear that the phenomenal growth in the cryptocurrency market is the result of a global investor base and that includes traders and investors from developing countries too.

For their massive participation, these third-world nations also deserve equal representation which is only possible when their native currencies are used as a peg by stable coins. That is exactly what Flourish aims at enabling. Now that we have discussed the need for equal representation, let us move forward and discuss why the Flourish protocol is important and the changes it can bring about.

3.1. The Flourish Transformation

Decentralizing the Centralized Model

The core objective of decentralized finance is to eliminate the downsides of centralized organizations, but unfortunately the present-day stable coins fail to achieve this. For instance, the USDC and the USDT require placing trust in a third party through protocols like the Liquid Network used by USDT. Besides that, there are also certain decentralized protocols like Maker and Synthetix, which rely on complex logistics that make the entire process cumbersome.

Particularly, when it comes to the users minting and burning stable assets all by themselves. It is not within reach of everyone to own and maintain vaults or collateralized debt positions which are mandatorily required by most present-day stable coin protocols. This is not the case with the Flourish Protocol which is cost efficient making use of OK-Chain

As the OK-Chain is designed for speed and cost-efficiency, these transactions are executed exceptionally fast and cost less than a fraction of a penny. This blockchain lays the foundation for a fully decentralized trading platform that allows for swapping of assets, and fiat currencies through correlation of tokens. On the same lines, the Flourish protocol would eliminate dependencies involved in creating and managing stable coins.

Eliminating Transaction Fee

For decades, international trade and commerce has been carried out through the exchange of fiat currencies via centralized institutions like banks and money exchangers. However, with the internet proliferation laying the cornerstones for globalization, there has been a sheer need for a more efficient and convenient means of money transfer. This is precisely what decentralized finance offers because it eliminates intermediaries that often charge hefty transaction fees and offer lower conversion rates. Also, the regulatory compliance required is extremely high and that creates a roadblock for those living in smaller economies.

For instance, PayPal to PayPal transfers in Kenya costs up to 5% with a minimum of $0.99 and a maximum of $4.99 per transaction (LivingInNairobi, 2021). A 0.99 US dollar would be around 112.3 Kenyan Shilling which is too much for a single transaction. This is what centralized finance did to smaller economies and one way of overcoming these high fees is through decentralized finance solutions like stable coins that are pegged to the value of a fiat currency. However, if those also charge high transaction fees in the form of slippage and gas, then its very purpose is defeated.

Therefore, the stable coin's protocol needs to be planned and defined well in advance. After all, its stability can only be warranted by unrestricted conversion of collateral to stable assets and vice versa. Unfortunately, none of the present-day stable coin protocols have gotten that far, so it would not be wrong to assert that full and unrestricted convertibility of collateral against stable assets and vice versa has not yet been achieved for any of the over-collateralized decentralized protocols.

Liquidity and Collateralization

Without the right choice of protocol parameters, it is near impossible to ensure cost-efficient issuance of stable coins. For instance, the stability fee collected by the Maker protocol on DAI makes it less desirable due to capital inefficiency. Over time, algorithmic stable coin protocols which are under-collateralized like Basis Cash, Iron Finance's Titan have proven to be inefficient and have run into liquidity crisis. The worst was the case of the Iron Titan Stable coin which fell from $60 to less than a cent in June, 2021 (CNBC, 2021). Such crises happen due to the absence of a well-regulated protocol that apportions the coins and has highly structured redistribution and reward mechanisms. The Flourish protocol is designed to be over collateralized with a robust DEX strategy which involves placing reliance on liquidity miners to ensure the availability of adequate collateral to the protocol.

Strong Support to Smaller Economies

At present, most stable coins are soft pegged to the US Dollar, it strengthens the US economy and defeats the very purpose of crypto tokens, which is decentralization. Apparently, none of the present-day stable coins are decentralized because that requires inclusiveness and that is impossible without a decentralized protocol that can facilitate building stable coins pegged to fiat currencies like Naira, Rupee, Rubel, and other currencies of the third-world nations.

Unless this is taken care of, the US Dollar would continue to dominate the DeFi world also and that again centralizes the power. After all, for every stable coin, the peg is secured as a reserve and since the USD is the peg for most mainstream stable coins, these cryptocurrencies are making the USD stronger in both centralized and decentralized worlds and weakening the currencies of lower economies. Currently, there are about 73.32 billion USDT and 46.41 billion USDC in circulating supply. So, that means these two stable coins have about $119.73 billion US Dollars in reserve (CoinMarketCap, 2022).

Unless there is a balance of fiat currencies used as pegs by stable coins, the USD would continue to dominate the cryptocurrency space and, in the years to come, this could gradually crumble and cripple lower economies. Furthermore, this void limits the participation of developers in decentralized finance space as most yield farming, lending, and borrowing protocols like Compound, Debank, AAVE, etc... are largely USD-centric.

Eliminates Conversion-related complexities

One of the major roadblocks in any type of international trade and commerce is currency exchange because the rates keep fluctuating. This only gets worse depending on the money exchanger or banker used because each of them has an internal mechanism to calculate the exchange rate and that is seldom the real-time rates. That deprives the parties involved from the opportunity to leverage money market fluctuations to their benefit.

For instance, when the conversion rate of USD to Naira goes up from 415 to 416 and real-time rates are applied, a merchant withdrawing 50,000 USD can make an additional 50,000 Naira. Likewise, the payer can wait for the price to dip and then move the money but that is seldom possible because centralized institutions like banks and money exchangers are for-profit businesses. So, they have their exchange rates worked out to generate maximum profits.

Besides bad exchange rates, arithmetic miscalculations also sometimes result in losses as it is difficult for ordinary people who have an inclination towards personal finance, but lack the aptitude required for mathematical calculations. It's not just the novices, but even Experts tend to make conversion errors which lead to loss of profits and/or capital, as the case may be. This happens because their minds are adapted to using their local currency and therefore, there is a sheer need for stable coins pegged to those currencies.

The aim here is to change the status quo with the Flourish Protocol which leverages the best of centralized and decentralized protocols, as well as over-collateralized approaches. Flourish protocol is a decentralized version of crypto backed stable coins allowing swaps at oracle value between synthetic assets and collateral. The protocol accepts certain trusted stable coins as well as its native coins as collateral in order to remain insured against market volatility and the price fluctuations.

The idea with Flourish is to enable the spread and democratization of digital stable assets pegged to many fiat currencies, especially of lower economies, creating localized markets for stable coins on CEXs and DEXs and to be a building block of tomorrow's DeFi and bank-less society.

4. FLOURISH VS OTHER CURRENCIES

Flourish is on a mission to replace not just fiat currencies but to also overcome the current concerns around existing stable coins which are expensive, inefficient, and pegged to the US Dollar only. As we discuss and architect Flourish, one might wonder if there was the need for yet another stable coin protocol to hit the crypto market. The answer to this is in affirmative because from technical and commercial perspectives, there is enormous scope for improvement. By converging cutting-edge protocols, Flourish aims at steering clear most of the reservations connected with stable coins such as collateralization, liquidity, and more. Let us now dive deeper into some of the key strengths of Flourish over other currencies, both fiat and crypto.

Backed by Collateral

Back in the day, the US currency was backed by gold reserves, but that practice ceased to exist on the 30th day of January 1934 when the Section 16 of the Federal Reserve Act was amended (The Federal Reserve, 2021). Ever since, the Federal reserve notes are not redeemable against any bullion or commodity, which means it has no intrinsic value.

This was the very reason stable coins came into existence but their high dependency on the US Dollar raised concerns. As none of the fiat currencies are backed by collateral but only the Government's word, the decentralized economy was born. However, most stable coins ended up being soft pegged to the U.S. dollar, which again resulted in the concentration of power with one nation, but that is soon to change. The Flourish protocol paves the way for this renaissance through an over collateralized and highly liquid platform.

Retention of Ownership

In the case of fiat backed stable coins like the USDT and USDC, there is a loss of ownership when the collateral is given to mint stable coins in a swap. So, the collateral no longer belongs to the person, meaning that the ownership is permanently lost. There is just one DAO which overcomes this hurdle by allowing people to own the collateral and that's the MakerDAO. The Flourish protocol would be designed on the same lines where those who mint DAI continue to own their ETH collateral.

The Flourish protocol not only emulates this concept but also goes a step forward and eliminates the one downside of the MakerDAO — the need to pay interest on the minted DAI. Typically, people use DAI to get leverage on their collateral, and Maker can be viewed as a cheap way to borrow money in order to get leverage.

Nevertheless, there is the element of interest which makes it expensive, but Flourish eliminates that through interest-free leverage on minted stable coin and that makes it the most cost efficient and accessible protocol. When you are a stable seeker, you simply use Flourish to convert your collateral to a variety of stable assets using existing stable coins or FLB tokens. (at least 25% for Stablecoins such as USDT, STATIS EUR, and at least 200% for FLB).

The Need for Over-Collateralization

The cryptocurrency market is highly volatile with sharp upward and downward movements that have been witnessed even in the most stable and trusted cryptocurrencies like Ether and Bitcoin. For instance, in June 2017, the price of Ether fell from $319 to 10 cents within a matter of a few seconds (CNBC, 2017). Likewise, there was a sharp decline in 2019 when the price of Ether declined from over a thousand US Dollars to less than a hundred dollars. When such sharp movements occur, the collateral's value drops and the only way to manage that is through over-collateralization.

Therefore, the Flourish Protocol would be over-collateralized which means that regardless of the price variations, the platform will continue to function seamlessly and enable users to swap collateral against stable coins and vice versa. Since the Flourish tokens can only be availed using whitelisted collateral like FLB and USDT, the price of the collateral needs to hold up for the swaps to come through. For the sake of clarity, let us now look at some possible scenarios to understand why over-collateralization is so important.

Scenario 1: Decline in the value of Collateral

Let's assume that a user deposits 1 FLB in the protocol which was worth $1000, to mint $500 worth of NGNC since the collateral ratio is 200%. If the price of FLB decreases to $750, the collateral ratio becomes 150% in value. The user is notified of the decrease in the value of FLB tokens and has two options — to provide additional collateral to the protocol or to risk liquidation. As soon as the collateral falls below 120%, liquidation is triggered.

Scenario 2: Increase in the value of Collateral

Let us now assume that the deposited FLB worth $1000 has increased in value and is now worth $2000 and the user decided to burn $500 worth NGNC. In this case, the NGNC is sent to the burn address and can be retrieved for $2000 worth of FLB tokens. This actually means that the quantity of collateral sent to the protocol is always constant. 1 FLB deposited at minting will always be equal to 1FLB at withdrawal (minus fees) even though the value may change according to market price.

Scenario 3: Using Stable coins as collateral

Our Assumption in this scenario is that Fiat currencies are more stable or rather perceived to be more stable in relation to each other than volatile cryptocurrencies. Therefore, 125% is considered as good collateral for minting other stable coins. If you wish to mint $100 worth of NGNC, you send 125 USDT to the flourish protocol to get $100 worth of NGNC or whichever currency you want to mint.

4.1. Overcoming Liquidation Concerns

As we have discussed the triggering of liquidation when a certain level is hit, one may wonder if that can really happen when stable coins are used as collateral. A straightforward answer would be a big yes because although stable coins/fiat currencies are fairly stable in relation to each other, things can still go downhill. For instance, if a user deposits USDT to mint NGNC and the US Dollar falls by 18% against the Naira, then the position would be liquidated at the remaining 7%.

To overcome this, the protocol aims to strategically use stronger currencies as collateral to avoid quick liquidation when the collateral currency depreciates. Nevertheless, it would be possible to use weaker currencies as collateral against any other stronger currency, but only as long as the position's collateralization level is maintained. Let us now dive deeper into how the protocol aims to remain overcollateralized.

4.1.1. Introducing Standard Liquidity Providers - Insurance of the Insurance

The solution proposed by Flourish to remain over-collateralized is to resort to Liquidity Providers (LPs), that is, extra agents that bring in additional collateral to the protocol and help manage its risk. To achieve this objective, the protocol relies on Standard Liquidity Providers (SLPs). The SLPs provide liquidity like any other liquidity providers one finds on other protocols like Compound, Uniswap, Aave, etc... In return for their efforts, they automatically accrue interests on the assets they brought into the ecosystem. Throughout the process, their risk is limited to slippage which only occurs when the protocol is not well collateralized, and they want to cash out. This is referred to as impermanent loss. Let us now delve deeper into how the SLPs are incentivized and also get an understanding of their risks.

4.1.2. Incentives for SLPs

When lending money to over-collateralize the protocol, SLPs are taking a small risk for they would be incentivized with a fraction of the transaction fees generated while trading, minting, or burning stable coins on our DEX. The transaction fee is redistributed to SLPs proportionately based on how much they contribute to the protocol. In certain situations, the SLPs will also be able to stake their positions and receive more FLB tokens.

At each point in time, the protocol owns reserves which are only useful when redeemed by a user, a SLP. Part of the reserves can then automatically be transferred to strategies (like SyncDao strategies) responsible for getting yield on it for instance lending to protocols like Compound or Aave. In this case, SLPs end up earning interests not only on the collateral they lent but also on the collateral brought by stable seekers. Let us understand this with a suitable illustration.

Illustration

Suppose the protocol owns 50 FLB out of which 40 comes from users who minted stable coins and 10 comes from LPs. If all the money of the protocol is put in lending strategies, LPs will be receiving interests on 50FLB although they just brought 10FLB: they receive 5 times more interest than they would get by lending directly to other protocols. Due to this multiplier effect, the protocol is able to guarantee higher yield to SLPs than other lending platforms. In general, the fewer SLPs there are, the more a single

SLP can receive as transaction fees and interest. This incentivizes SLPs to adequately collateralize the protocol.

4.1.3. Risks of SLPs

Although SLPs can earn huge rewards, it cannot be denied that they also face certain risks as their very purpose is to shield the protocol from potential liquidity crisis. As the SLPs are here to mitigate the risks and to ensure collateralization of the protocol in situations when the price falls, there lies a possibility that they may not be able to get all their money back. Nonetheless, this loss is temporary as long as the LP tokens stay in the pool because when the prices rise, the losses would be reversed.

Illustration

Let us assume that 500,000 NGNC were minted with 2 FLB backing it. At that time, if 1 FLB was worth $1000 (500,000 NGNC), it would be appropriate to state that the protocol is fully collateralized. At this stage, if an SLP brings in an additional 1 FLB to the protocol, that SLP will earn the fees and the yield rate of the whole 3 FLBs available plus the transaction fees accruing at that time. This is when the protocol is adequately collateralized but that may not always be the case.

So, if in the future the value of 1 FLB is only worth 420,000 NGNC, the protocol would be under-collateralized and the SLP will either have to withdraw with a loss called slippage or wait until the protocol's liquidity improves. In case of an exit, the slippage must be borne and if that is 90%, then the SLP willing to cash out 1 FLB will only be able to get 0.9 FLB.

The slippage factor will be a piecewise linear function of the collateral ratio to make the risk predictable for SLPs while still incentivizing them to stay in the protocol. Having a continuous function is also necessary to limit front-running effects. The smaller the collateral ratio, the bigger the slippage. Above a certain collateral ratio (for instance 120%), no slippage will be set for SLPs.

Every Operation described above takes place on the Flourish Protocol, hence, a bridge will be available to convert stable coins from other chains to the Flourish chain and vice versa.

5. THE FLOURISH ECOSYSTEM

The Flourish Protocol is built on OK Chain and therefore possesses its inherent traits and adds some more of its own to create a comprehensive ecosystem capable of ensuring equal representation.

5.1. The Stable Seekers

The stakeholders in the Flourish ecosystem are mainly the token owners or stable seekers and the liquidity providers. As we have already discussed the SLPs, let us now move forward and talk about how the other stakeholders fare on this platform. It is worth recollecting that the goal of the Flourish protocol is to facilitate the minting of stable assets tradable on the blockchain. This is achieved by issuing country-specific Flourish tokens against whitelisted collateral like FLB or USDT.

5.2. Mint Transactions

To generate a stable asset, a user just has to send a whitelisted collateral to the protocol and then an oracle determines how many Flourish stable coins the user can be allowed to mint. Each Flourish stable coin is a country-specific token pegged to the currency of that particular nation and is named after it like, for instance, Nigerian Naira Coin (NGNC). So, whoever wants to purchase those coins may do so by providing collateral and availing the tokens against it at oracle value and with minimal fees.

Similarly, the owners of NGNC and other Flourish Stable coins can use the Flourish protocol to seamlessly exchange their tokens for their collateral for a small fee. The experience of issuing the stable coins with collateral and burning the stable coins for collateral is hence similar to that of a swap from a user's perspective. However, it is worth noting that the quantity of collateral sent to the protocol always remains constant. The below mentioned illustration gives a snapshot of how the exchange takes place.

Illustration

If the oracle price for a USDT is 500 NGNC, with a transaction fee of 0.3% of the total transaction value, then a stable seeker depositing 100 USDT in the Flourish Protocol will receive 36,375 newly minted NGNC for it.

The Breakdown
For USDT as collateral, the user will over-collateralize their position by 25%.
$100 USDT = 50,000 NGNC
$25 USDT = 12,500 NGNC is held as over collateralization.
$75 USDT = 37,500 NGNC - 0.03%(fees)
$72.75 = 36,375 NGNC

5.3. Burn Transactions

Just like the minting process which we have already discussed, the Flourish Stable coin holders can burn their coins to get the whitelisted stable asset back from the protocol. The amount is released based on the collateral price specified by the oracle minus the transaction fees. The stable coins received by the protocol are then burnt. However, if a user deposits USDT as collateral but requests for some other whitelisted collateral like FLB while burning their stable coin, Flourish will only send the requested asset but for an amount equivalent to the initial USDT deposited.

Illustration
If the oracle price for FLB is $1000, and the transaction fees are 0.3%, then a user giving Flourish one FLB will receive in exchange 242,500 NGNC
1FLB = $1000 = 500,000 NGNC
$500 = 250,000 NGNC is held as over collateralization.
$500 = 250,000 - 0.03%(fees)
$485 = 242,500 NGNC

At the time of burning, the same 0.3% fee is maintained when the user sends 242,500 NGNC to the burn address. In all cases, mint and burn transactions are executed without slippage on the price, regardless of the size of the transaction.

It is worth noting that the transaction fees collected by the protocol is to remunerate LPs who are necessary to ensure liquidity and to avert risks such as front-running and flash loan attacks. Let us now discuss the Oracles on this platform more elaborately.

5.4. Oracles

The Oracles play a pivotal role in the Flourish ecosystem when it comes to determining the value of an asset and releasing the right number of Flourish tokens. Basically, the Oracles access price feeds and then take into consideration internal protocols prior to allowing swaps between collateral and stable assets. The value so determined is called the oracle value.

To eliminate this risk, the protocol relies on its DEX Time-Weighted Average Price (TWAP) oracles with a minute time window and on Chainlink price feeds. The protocol will compare the value obtained from Chainlink with that of its DEX (using USDT pools for USD) and keep the one that is most beneficial.

If the two oracles give two different values for the USD price of FLB (1000S and 1100S), for a mint transaction, then the protocol will use the lowest oracle value to compute the number of stable coins to be issued based on the collateral. Conversely, for a burn transaction, the protocol will use the highest value to convert a stable coin amount to an FLB amount.

5.5. Strategies

The platform's strategy to lend a part of the protocol's reserves to other lending platforms makes it highly lucrative for the SLPs and also benefits the protocol as the surpluses are accumulated in the treasury. It allows Flourish to offer interesting yields and also to accumulate some of the surpluses. We decided on this approach after studying the immense success of Yearn.

Therefore, Flourish relies on strategies that handle Lender contracts interacting with lending and other yield farming protocols. Just like on Yearn, Flourish would gradually add new strategies to generate yield on the protocol's collateral based on governance votes. Each strategy can also support multiple lending platforms or protocols. The first implemented strategy would be derived from examining different lending strategies and picking one with the best APY.

5.6. Launching Stable coins

Flourish aims to be a protocol that lets users mint synthetic tokens pegged to an asset of their choice —something that would always be a community-driven decision. Soon after the launch of FLB, the project aims to kick start with only a few synthetics like NGNC and USDT.

6. FLOURISH PROTOCOL DESIGN

Flourish Protocol is built upon the OK Blockchain and as such Leverages the Security and Ecosystem of the OK Blockchain. It is Flexible and Easy to use and built with high degree of security features. The oracles are built to be fast and accurate eliminating slippage in conversion and guaranteeing market efficient price. The smart contract is developed in such a way that all white-labeled Fiat currency can be used as collateral to minting other stablecoins. For example, BUSD can be used as a collateral for minting NGNC and vice-versa.

7. Flourish Protocol's Governance Model

The Flourish protocol is a community-driven Decentralized Autonomous Organization (DAO) that relies on the voting mechanism to make critical decisions. However, the long-term goal is to minimize the need for active governance and to turn it into a fully autonomous self-running machine that runs based on predefined algorithmic calculations without the need for human intervention.

The DAO will work towards enabling the protocol to reach its full potential through prompt and timely improvements. This includes strategic decisions such as parameter tuning, protocol upgrades and integrations, and even growth and expansion strategies like launching new Flourish Stable Coins across various geographies.

The Governance Reward

The DAO shall use the FLB token for governance purposes also, which would position it for growth by increasing its utility and demand. This is further complemented by the fact that the supply of FLB tokens is capped at 100 million out of which 50% will be locked for future purposes.

Emergency Modules

The biggest fear of any stable coin protocol is to be unable to maintain the convertibility between its stable coins and the collateral. In such cases, the Governance model usually requires increasing fees on exit transactions to discourage them, but that can hurt the platform's reputation.

As long as the protocol remains over-collateralized, this risk is mitigated and therefore it is essential to have enough SLPs and accumulated surplus from transaction fees and lending yield. This may not always happen and therefore the protocol has a set of predefined actions to manage crises.

Responses include what we have already discussed like slippage to prevent SLPs from exiting, dynamic transaction fees for users minting and burning stable coins, and the last resort — liquidation of collateral to enable the protocol to re-collateralize itself.

8. TOKENOMICS

DISTRIBUTION	AMOUNT	VESTING PERIOD
MAXIMUM SUPPLY	100,000,000	---------------
IEO	50%	10% MONTHLY
STAKING REWARD	25%	N/A
COMPANY RESERVE	10%	1YEAR
MARKETING & AIRDROP	5%	N/A
TEAM	7%	1YEAR
ADVISORS	3%	1YEAR

ROUNDS	AMOUNT	VESTING PERIOD	PRICE
SEED	25,000,000	20% MONTHLY	$0.1
PRESALE	15,000,000	12% MONTHLY	$0.2
PUBLIC SALE	10,000,000	10% MONTHLY	$0.3

UNSOLD TOKENS WILL BE BURNED!

9. Conclusion

The Flourish protocol is built on OK Chain that lays down the foundation for stablecoins pegged to respective fiat currencies and in a capital-efficient manner. As an over-collateralized protocol that leverages SLPs and DEX liquidity providers, Flourish mitigates the risks associated with under-collateralization.

Also, it has a strategy in place to leverage over-collateralization and associated downsides by lending part of the reserves to other lending platforms. This not only ensures proper utilization of resources, but also paves the way for attractive returns. Such a mechanism is very much necessary to draw the attention of SLPs in the highly competitive cryptocurrency marketplace.

As discussed, countries like Nigeria and Kenya account for high trade volumes and that highlights the need for stable assets that are pegged to their local currencies. This facilitates trade and commerce because users accustomed to a particular currency can use the corresponding stable coin and do not have to run computations that may turn out to be erroneous. Also, they don't have to lose out on transaction fees or succumb to bad exchange rates offered by centralized institutions like the banks and money exchangers.

Overall, the protocol strengthens the local currency of a particular nation from the proceeds which come from it. Also, it acts as a store of value for digital asset enthusiasts who wish to receive or trade without bothering about running exchange rate calculations. With an elastic supply of collateralized tokens, the Flourish protocol truly decentralizes the world of stable coins and offers massive growth opportunities.

10. BIBLIOGRAPHY

Clacified. (2021, November 24). *Strongest currency: Top 10 highest currencies in the world in 2021*. Retrieved from Clacified: https://clacified.com/business/16/top-10-highest-currencies-in-the-world-in-2021

CNBC. (2017, June 17). *Ethereum briefly crashed from $319 to 10 cents in seconds on one exchange after 'multimillion dollar' trade*. Retrieved from CNBC: https://www.cnbc.com/2017/06/22/ethereum-price-crash-10-cents-gdax-exchange-after-multimillion-dollar-trade.html

CNBC. (2021, June 24). *Why the crash of crypto token 'titan' that burned Mark Cuban may not foretell a bitcoin plunge*. Retrieved from CNBC: https://www.cnbc.com/2021/06/24/why-titan-crypto-crash-that-burned-mark-cuban-may-not-signal-similar-bitcoin-plunge.html

Coin Telegraph. (2021, November 25). *Russians transact $5B in crypto each year, Bank of Russia says*. Retrieved from Coin Telegraph: https://cointelegraph.com/news/russians-transact-5b-in-crypto-each-year-bank-of-russia-says

CoinDesk. (2021, December 16). *India's Biggest Crypto Exchange Saw 17-Fold Jump in Trading Volume in 2021*. Retrieved from CoinDesk: https://www.coindesk.com/markets/2021/12/16/indian-crypto-exchange-wazirxs-trading-volume-jumps-to-over-43b-in-2021/

CoinGeek. (2021, September 16). *Kenya leads in global P2P volume for second year in a row*. Retrieved from CoinGeek: https://coingeek.com/kenya-leads-in-global-p2p-volume-for-second-year-in-a-row/

CoinMarketCap. (2022, January 12). *Tether*. Retrieved from CoinMarketCap: https://coinmarketcap.com/currencies/tether/

CoinMarketCap. (2022, January 20). *Tether*. Retrieved from CoinMarketCap: https://coinmarketcap.com/currencies/tether/holders/

CryptoSlate. (2021, August 20). *Emerging markets like Nigeria, Kenya led 880% global crypto growth in 2021*. Retrieved from CryptoSlate: https://cryptoslate.com/emerging-markets-like-nigeria-kenya-led-880-global-crypto-growth-in-2021/

Investopedia. (2021, December 14). *Countries Where Bitcoin Is Legal and Illegal*. Retrieved from Investopedia: https://www.investopedia.com/articles/forex/041515/countries-where-bitcoin-legal-illegal.asp

LivingInNairobi. (2021, May 08). *PayPal In Kenya | A Step-By-Step Guide For 2022*. Retrieved from LivingInNairobi: https://www.livinginnairobi.com/paypal-in-kenya/

Reuters. (2021, October 12). *Crypto trading thrives in Nigeria despite official disapproval*. Retrieved from Reuters: https://www.reuters.com/business/crypto-trading-thrives-nigeria-despite-official-disapproval-2021-10-12/

The Federal Reserve. (2021). *Is U.S. currency still backed by gold?* Retrieved from The Federal Reserve: https://www.federalreserve.gov/faqs/currency_12770.htm

The Guardian. (2021, July 31). *Out of control and rising: why bitcoin has Nigeria's government in a panic*. Retrieved from The Guardian: https://www.theguardian.com/technology/2021/jul/31/out-of-control-and-rising-why-bitcoin-has-nigerias-government-in-a-panic#:~:text=The%20dollar%20volume%20of%20crypto,many%20trades%20untraceable%20by%20analysts.