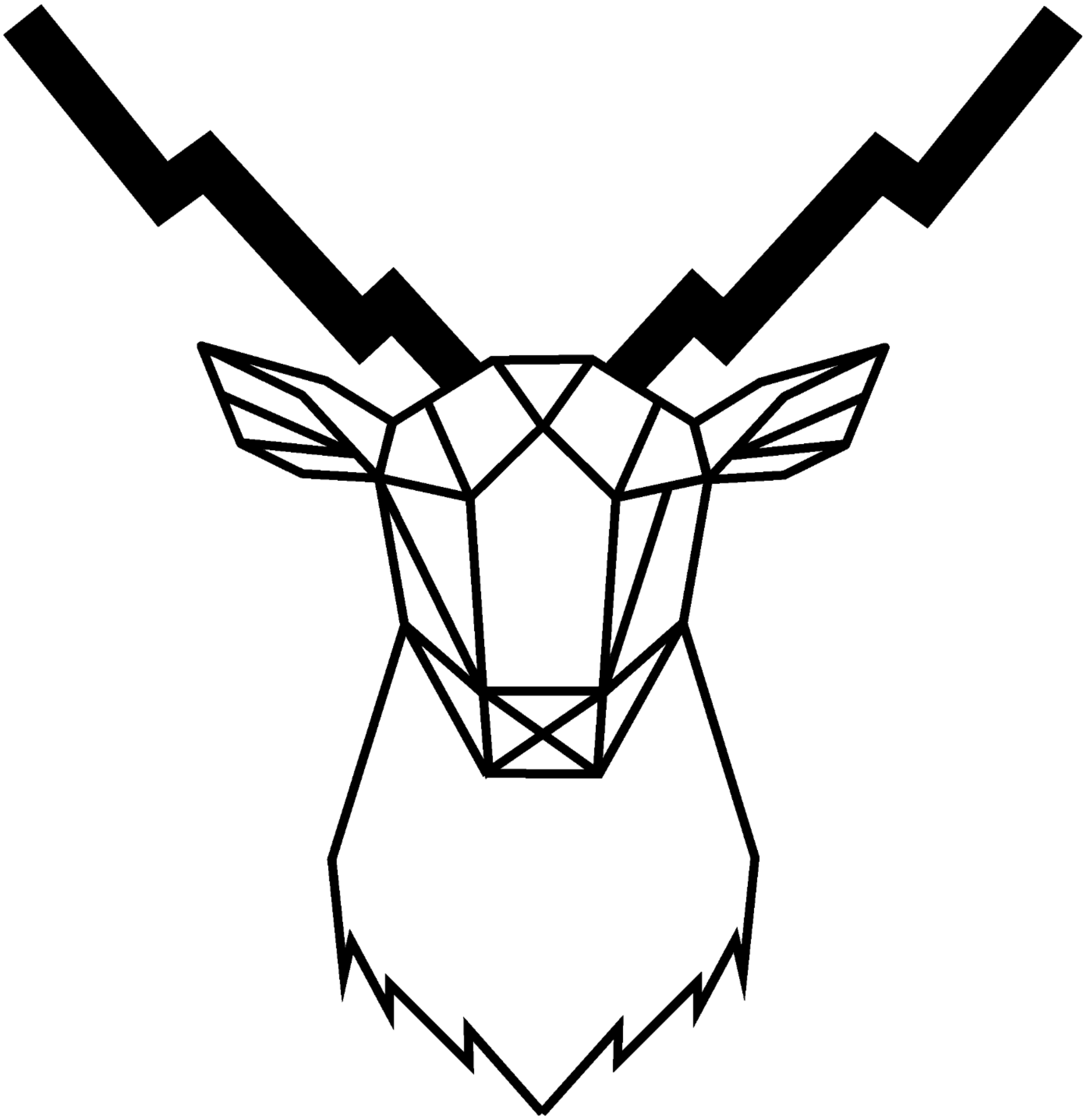
# Deriv.Ex

**The first derivative cryptocurrency exchange.**



Whitepaper: v1.0

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# What is Deriv.Ex ?

Deriv.Ex is a project launched in November 2022 by Alexandre K. and Julien S. and which aims to create a cryptocurrency exchange specialized in derivatives: the Deriv.Ex exchange.

# Why Deriv.Ex ?

## Issue.

Cryptocurrency and decentralized finance has been drastically shaken in recent years. Thanks to the BullMarket of the period 2020-2022 the world has turned its attention to these new safe havens. Despite the exceptional potential of this new technology, some people are not able to see it in a positive light and our passion has fallen victim to a massive boycott.

Indeed, Europe applies more and more laws to regulate the market, which drastically reduces the freedom promised by the crypto currency.

Between taxations and bans, it is now almost impossible to launch your idea or even to live from this sector which was until now, in full expansion.

Nowadays, the only companies that manage to survive are in fact propelled by state agencies or banks that are already well established and that only take a piece of the pie. Yet, you know it would be right to live in a world where every project is free to have enough ambition to compete in any market.

A world where we don't kill innovation, where we regulate with dignity and encourage participation in change and creation.

Deriv.Ex wants to give you that freedom...

## Solution.

<u>The correlation token :</u>

The general idea of absolute value correlated tokens is as follows:

The price of a cryptocurrency is subject to the classic law of supply and demand. To make our project work, our tokens must have a price that is independent and does not respect this law.

In fact, if we want to create a currency that is in a short position with respect to another, its price must follow, not supply and demand, but the price of the crypto-currency on which the short position is based.

Our tokens therefore take advantage of a monopoly situation, which allows us to create tokens with customizable prices.

Let's take an example:

Let's say you want to bet on the decline of bitcoin in the near future, since short ETFs are banned in Europe, it is difficult to find a simple solution to hope to make money on your hunch of a decline in the bitcoin price.

So you find our platform Deriv.Ex, offering you derivative crypto-currencies, one of which would have a price with a short situation compared to the bitcoin price.

Thanks to Deriv.Ex, you have the possibility to trade as you wish.

## How it works :

As said in the above section, the functioning of the token price variations is based on the monopoly theory.

This theory, although normally applied to the goods and services markets, can also be applied to the money markets. Indeed, just like the central bank, it is with a monopoly of emission that we manage to fix the value of a currency. We intend to use this system but in a simplified way, and therefore we will be able to fix the value and the price of our crypto-currencies.

For each of our tokens, we will apply this process:

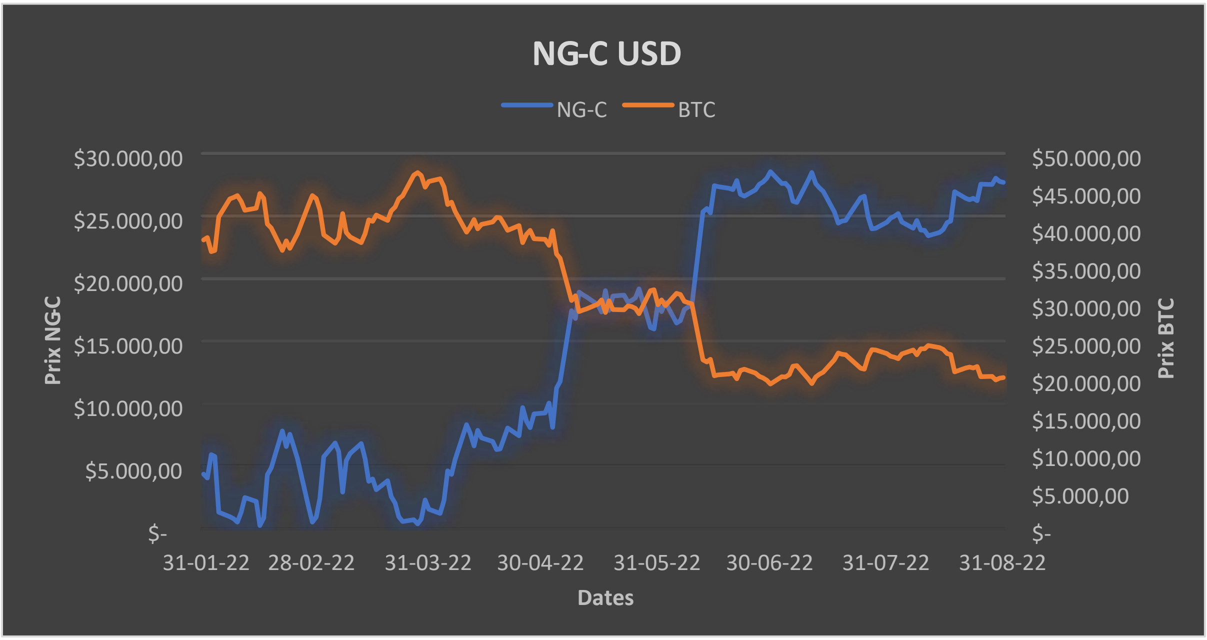
The first step will be to set an issue price,

The second step will be to introduce it to the resale market so that everyone can benefit from these crypto-currencies.

# Simulation :

Here is a simulation of the price of NegativeCoin (NG-C),

a derivative cryptocurrency that allows for the shorting of Bitcoin (BTC).



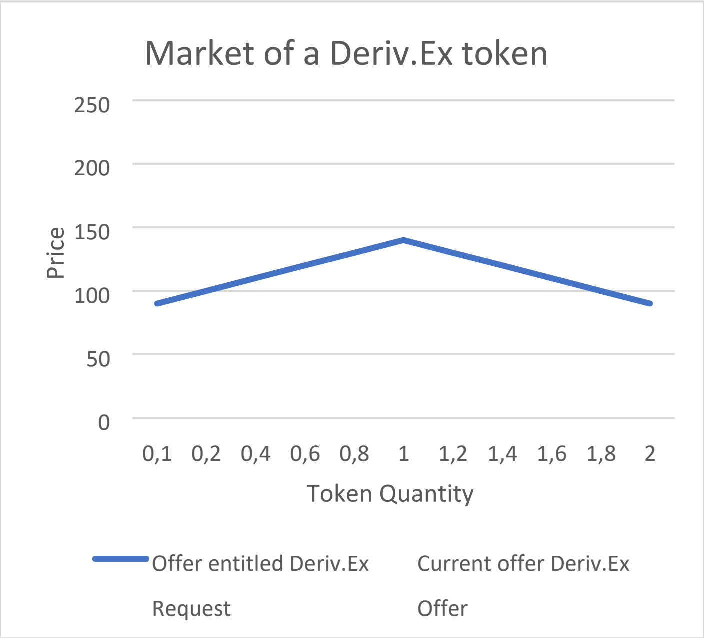

In this simulation we have seen a maximum daily variation of 401%, which is a daily leverage of x4. We have also seen the opposite with daily variations of -89%, i.e. a leverage of -2x.

Over the period analyzed (from 01-01-2022 to 01-09-2022) the variation between the minimum and maximum reached by NegativeCoin (NG-C) is 11441%, i.e. a leverage of x115 in 9 months.

(In contrast, it took Bitcoin 6 years to achieve a similar change. To understand these figures, it is important to know that the maximum reached is $27835.97 and the minimum is $241.19).

# Economic intelligence:

The theory of monopoly states that the purchaser with the monopoly maximizes the selling price in this way:



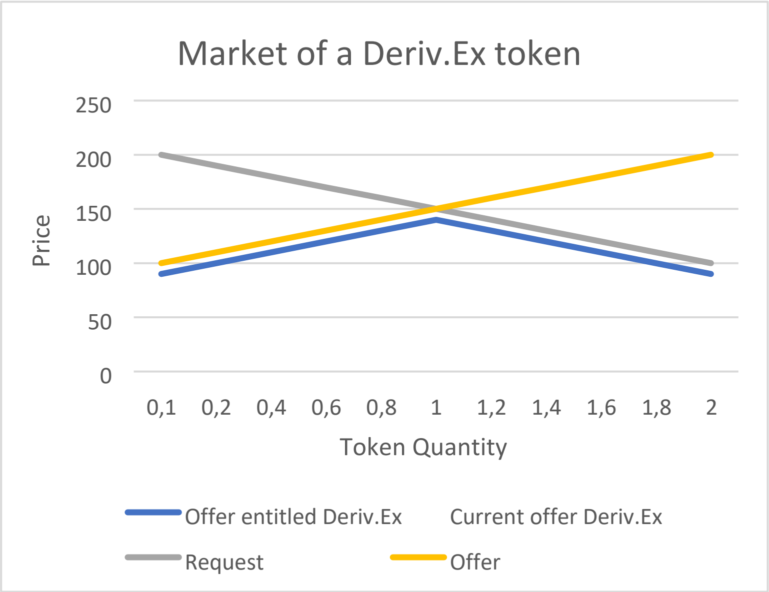

Here you can see the quantity maximized in one unit at one price.

(Here the price indicated is not an arbitrary fixed price but the price of the token as subject to variations).

This is the minimum price to provide a token with variations correlated in absolute value to that of another cryptocurrency.

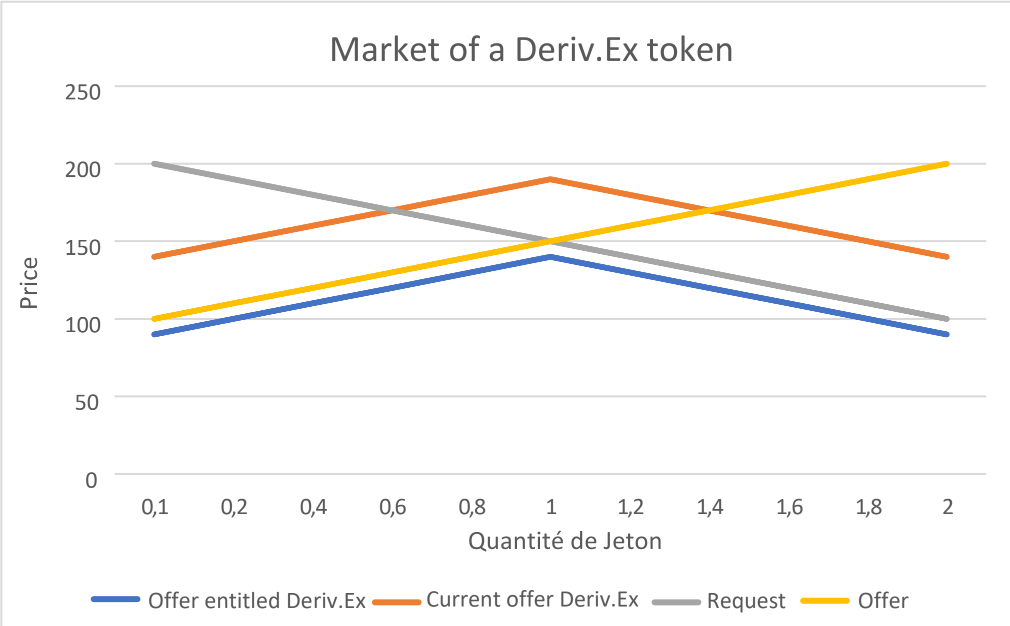
Now we will add the law of supply and demand:

On this graph you can see that the demand is higher than our minimum price, this is quite normal because it joins the supply point.

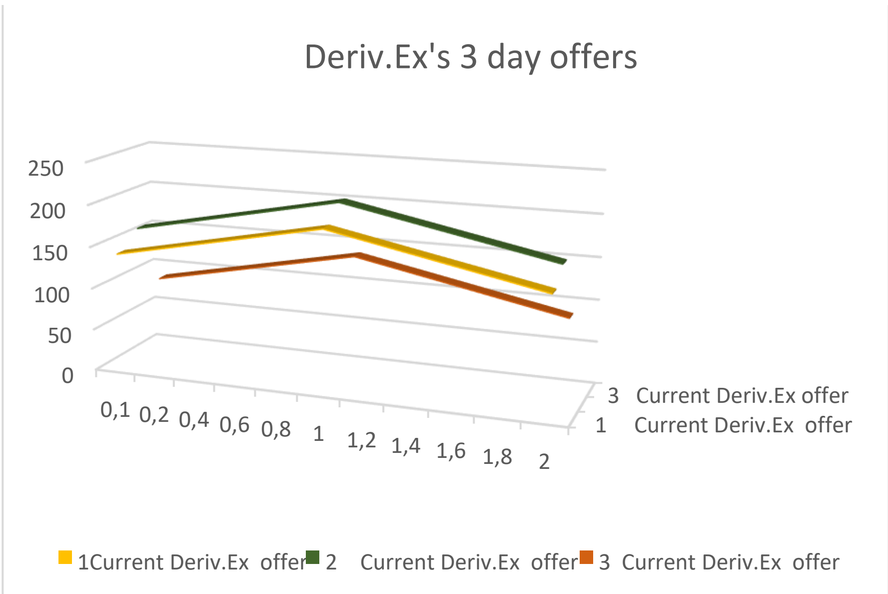


Here is the real offer of Deriv.Ex.

The orange curve is the issue price, thanks to this price we can prevent a pump because the issue offer will block forever a too big decorrelation upwards. It is important to note that you will not necessarily sell at a loss. Indeed, here we only show you the sale of a token at a time t, remember that time updates the variations.




Here is a 3d example of what the issue price looks like on the orange curve in the chart above. You can see that it evolves allowing people in t1 to make a capital gain in t2 but risk losing in t3.



# Economic risks:

Thanks to the monopoly of our cryptocurrencies, we can prevent the price from soaring by imposing a price ceiling and by fixing an infinite quantity of tokens that will then be issued on the secondary market (purchase on other platforms than Deriv.Ex).

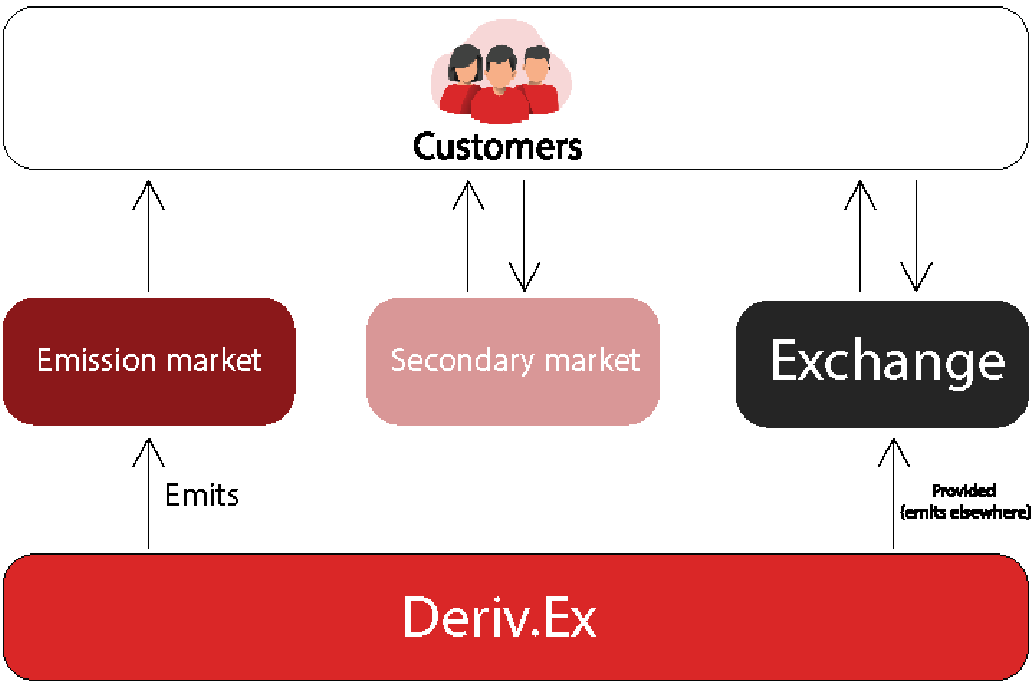
Also, it is impossible to counter the sale of a token at a price lower than the normal price. This is why microeconomics is based on the non-satiation theorem (the fact that an agent always wants more at a greater profit rather than less at a loss). Therefore, if a non-rational individual were to sell at a considerable loss (imagine 50% less than the current price), it is impossible to fight against this order unless we intervene manually, which is neither ethical nor legal in traditional markets.

Fortunately we have ways to limit the damage.

1) He must have a limited quantity. This limits the breakage because he will not be able to impose a lower price for very long. We can then push the price up when the non-rational individual has emptied his stocks.

2) He then lost money. So that not everyone can buy, we will set a floor price so that we do not allow the sale at a loss.

## Graphical representation of the system:




## Mathematical intelligence:

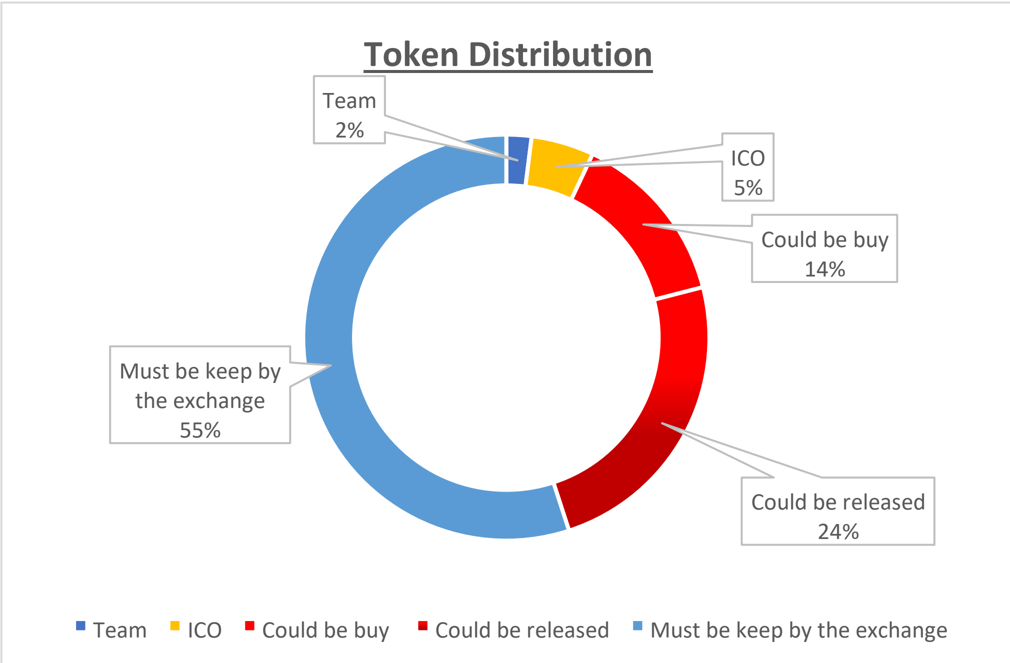
Here is how the price of a Token is set:

For a Crypto X and a Token Y with PX and PY their respective prices.

- ⇨ $P_{X1} – P_{X0} = \Delta P_X$
- ⇨ Si Short ○ – $(\Delta P_X)$
  - ○ $P_Y + -(\Delta P_X) = P_{Y1}$
- ⇨ Si Long ○ $(\Delta P_X)$ ○ $P_Y +$ $(\Delta P_X) = P_{Y1}$

Attention, repeating this calculation ad infinitum can fall into the negatives. This is theoretically impossible for a price. Therefore, a random variable is fixed as a floor variation. Thanks to this floor, if the variation is too important and if it risks to make the price pass under the negatives then automatically a rebalancing of the prices is made via a second random variable. This variable has been created with the objective of disturbing the Token price as little as possible, so it will be almost invisible on the charts and for the consumer.

# Tokenomics :




As a security measure, 55% of the tokens will be kept by Deriv.Ex to ensure the necessary monopoly for the proper functioning of our crypto-currencies.

# Conclusion.

To conclude, Deriv.Ex will allow to sell tokens with independent prices but subject to price variations in absolute value of other crypto-currencies.

These prices are made possible by the principle of monopoly, a key law of the economy that allows us to sell tokens when they are issued on the market in the manner of a central bank. This power allows us to ensure the security of our tokens and the smooth running of their prices.

# future perspectives.

It is very complicated to implement this project without hiding that it is extremely centralized. We are committed to gradually find a way to decentralize our tokens and thus gain trust via our consumers.