



Introduction

Trilemma

The most fundamental component in DeFi is obviously stablecoin. However, as shown in several issues, the ideal stablecoin that meets decentralization, stability, and capita...

Stablecoins

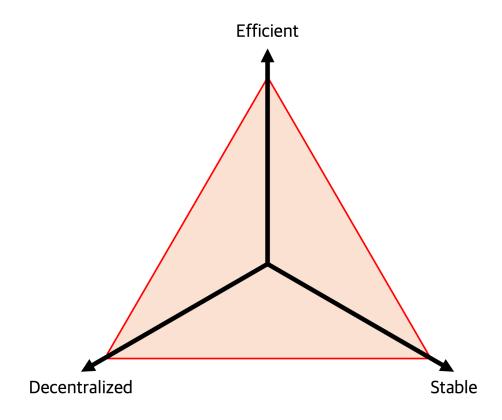
As is well known, stable coins are generally classified into three categories - fiat-collateralized, crypto-collateral, and algorithmic ones.

FOX

Decentralization is an essential thing for DeFi to exist as a truly De-Fi. So, we created FOX. We adopted the idea of FRAX but used decentralized collaterals rather than fiat or ...

Trilemma

The most fundamental component in DeFi is obviously stablecoin. However, as shown in several issues, the ideal stablecoin that meets decentralization, stability, and capital efficiency has yet to exist nowadays. Until just before.



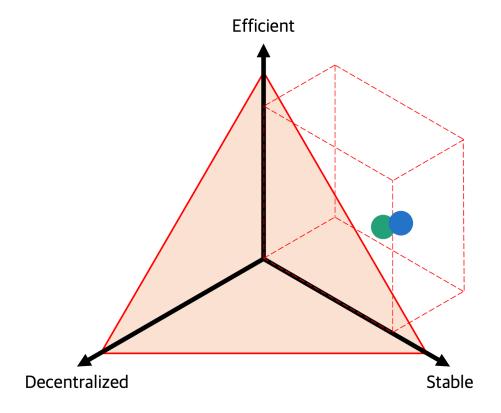
We tried to find the solution and finally designed F0X, the ideal stablecoin.

Stablecoins

As is well known, stablecoins are generally classified into three categories - fiat-collateral, crypto-collateral, and algorithmic ones.

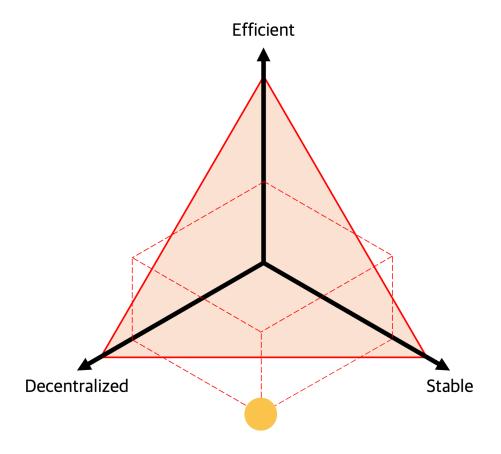
Based on these classifications and the stablecoin trilemma, let's look at the current status of stablecoins.

Fiat-collateralized



Fiat-collateralized stablecoin has a real dollar as collateral, so it has to be fundamentally stable. But there are many issues due to centralization. For example, there is a risk of censorship and central institutions' failure to invest.

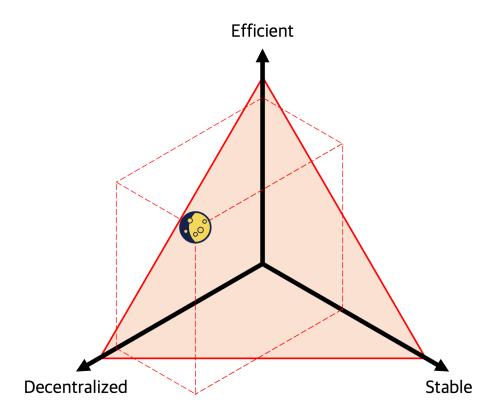
Crypto-collateral



Crypto-collateralized stablecoin is not free from the issue of price fluctuations of collateral. That is why it is always designed to be over-collateralized, so be less efficient.

In order to alleviate the impact of price fluctuations, fiat-collateralized stablecoins are often used as collateral in crypto-collateralized stablecoin. It eventually acts as a wrapped fiat-backed stablecoin, so there is a risk of centralization that harms both decentralization and stability.

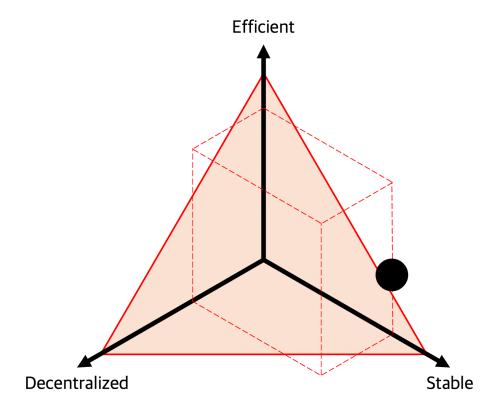
Algorithmic



Algorithmic stablecoin has the most flexible structure. Because there is no collateral, it is highly efficient and safe from centralization factors.

However, sufficient verification is needed to determine whether the algorithm works well. We already know about the failure of that one.

Hybrid



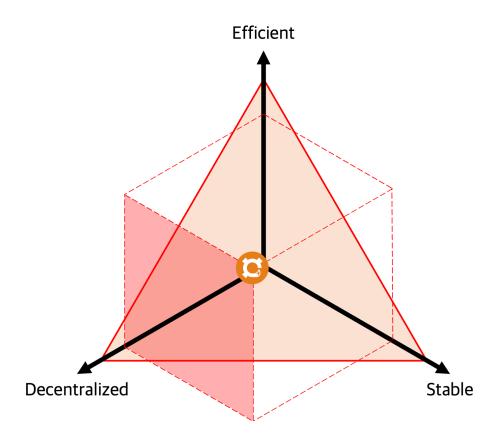
To solve this problem, hybrid stable coins combining their characteristics have emerged. For example, FRAX has increased efficiency by using an algorithmic feature in addition to collateralizing USDC.

If FRAX is highly trusted, the protocol increases the weight of the algorithmic part to improve capital efficiency. Conversely, when more trust is required, the protocol resecures stability by increasing the proportion of fiat-collateralized currency.

This idea has worked well so far. Still, there is a limitation that cannot be free from the centralization issue because a fiat basically backs it.

FOX

Decentralization is an essential thing for DeFi to exist as a truly De-Fi. So, we created FOX. We adopted the idea of FRAX but used decentralized collaterals rather than fiat or fiat-backed ones.



FOX is the first fully decentralized capital-efficient over-collateralized stablecoin, where a secure algorithm adjusts capital efficiency and stability.

The top priority was to exclude centralization risk through complete decentralization. The protocol safely adjusts efficiency and stability under the trust level, which was

designed to satisfy all the properties of the stablecoin.

Mechanisms



FOX was inspired by DAI and FRAX. It has a form of combining them into a seamless one. Like DAI, Debts can be minted from collaterals. Like FRAX, new stablecoins can be ...

Minting & Redeem

Minting

Recollateralization

Recollateralize can be called when FOX remains below \$1 for an hour. Users can earn share tokens by raising LTV or minting additional debts.

Buyback

Buyback can be called when FOX maintains above \$1 for an hour. It means FOX's trust is valued higher than the current trust level. After the trust level is adjusted upward, ...

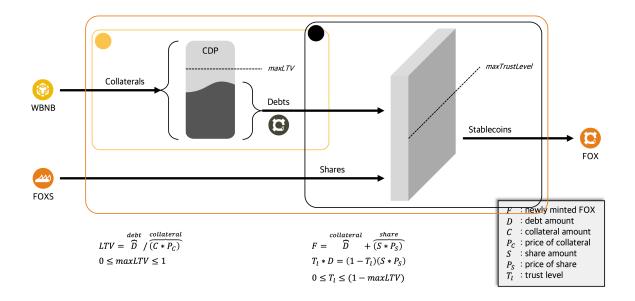
Pair Annihilation

Coupon

Liquidation

TRE

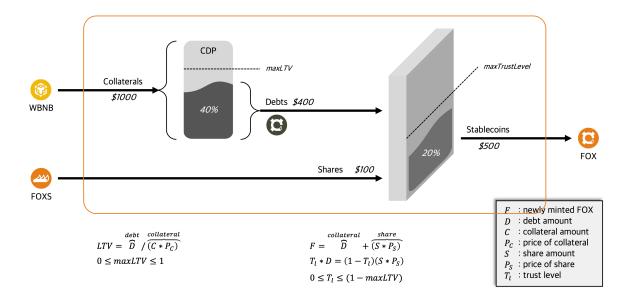
Overview



FOX was inspired by DAI and FRAX. It has a form of combining them into a seamless one. Like DAI, Debts can be minted from collaterals. Like FRAX, new stablecoins can be created by combining the debts and share tokens.

In other words, it can be understood as a protocol that creates stablecoin FOX through collateral BNB and share FOXS.

Minting & Redeem



Minting

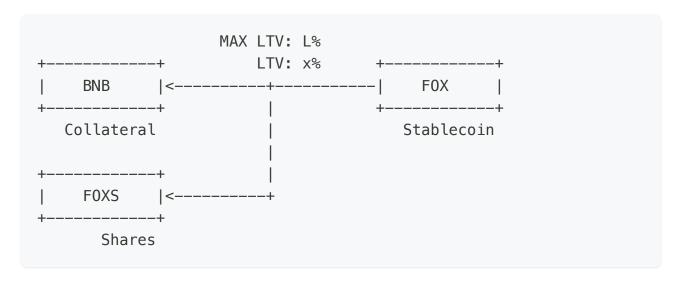
· Only CDP Owner

```
MAX LTV: L%
                           LTV: x%
  BNB
                                                  F<sub>0</sub>X
Collateral
                                                Stablecoin
  F0XS
```

- 1. Approve WETH to FoxFarm.
- 2. Approve FOXS to FoxFarm.
- 3. Execute openAndDepositAndBorrow() in FoxFarm.

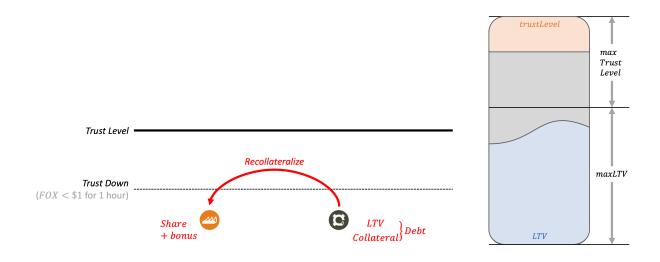
Redeeming

Only CDP Owner

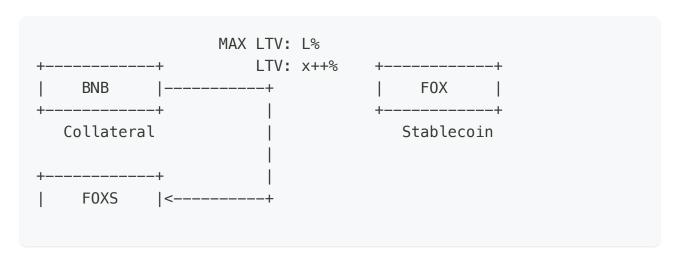


- 1. Approve FOX to FoxFarm.
- 2. Execute repayAndWithdraw() in FoxFarm.

Recollateralization

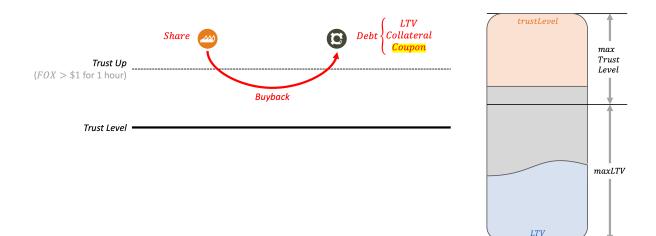


Recollateralize can be called when FOX remains below \$1 for an hour. Users can earn share tokens by raising LTV or minting additional debts.



The protocol can increase the stablity through these activities by archieving the proportion of collateral. Extra FOXS is given as a bonus to induce Recollateralize.

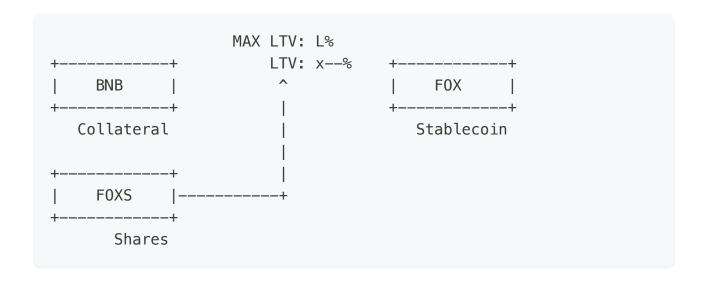
Buyback



Buyback can be called when FOX maintains above \$1 for an hour. It means FOX's trust is valued higher than the current trust level. After the trust level is adjusted upward, users can lower LTV, withdraw collaterals, or make coupons by repaying debts through spending FOXS.

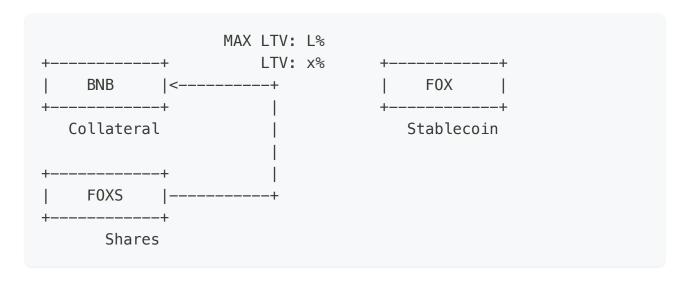
Repaying Debt

Anyone



Withdraw Collateral

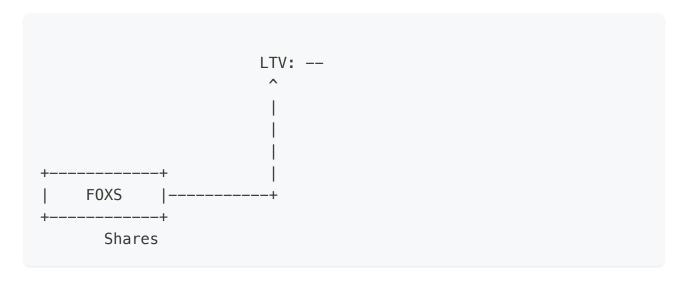
• Only CDP Owner



Pair Annihilation

Coupon

Anyone



The new feature coupon increases the utilization of FOXS.

The users without collateralized-debt-positions can be participate in the buyback process through coupon. The coupon can be treated as a CDP with negative debt without collateral.

Pair Annihilation

Coupon and CDP can be combined through the pair annihilation function. The CDP's debts are repaid as much as the coupon's negative debts.

♠ > Mechanisms > Liquidation

Liquidation



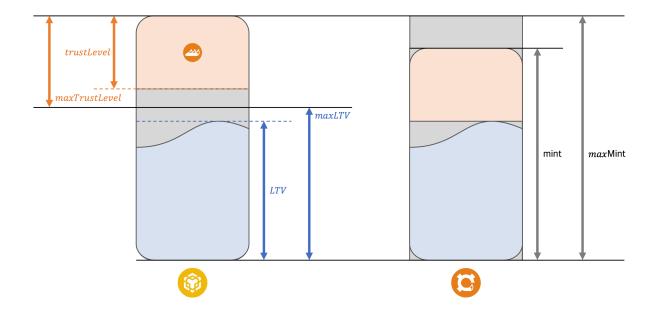
Safety

FOX has a maxLTV and a maxTrustLevel feature that keeps the protocol safe.

maxLTV is the upper bound of the debt that collateral position can have.

maxTrustLevel is the upper bound of the trust that the algorithm can adjust.

The trust level is a concept similar to the collateral ratio in FRAX, but there is a difference in that the upper bound exists. If the trust level is 20, it can replace collateral with share tokens by 20 percent.



The upper bound of this trust level is calculated from the maxLTV, where 100 minus maxLTV is the maxTrustLevel. For example, if maxLTV is 70%, maxTrustLevel is 30%.

It means that the trust level offsets the inefficient part of over-collaterals, and at the same time, the maximum width does not exceed the value of the collateral. Therefore, the protocol is safe because it is over-100% backed.



Tokenomics



There are many tokens in the FOX ecosystem; BNB, FOX, FOXS, veFOXS, and SIN.



TBD

FOXS



Tokens

There are many tokens in the FOX ecosystem; BNB, FOX, FOXS, veFOXS, and SIN.

BNB (WBNB)

BNB is the native coin at BNB Smart Chain. BNB is internally converted into WBNB (wrapped BNB) as ERC20 for easy use in smart contracts. The conversion ratio between WBNB and BNB is 1:1.

In the near future, BNB will be converted into aBNBc to earn staking rewards simultaneously.

FOX



FOX is the over-collateralized stablecoin backed by $\overline{\text{BNB}}$. Through $\overline{\text{Fox Farm}}$, users can mint FOX by giving $\overline{\text{SIN}}$ and $\overline{\text{FOXS}}$.

SIN



Stable INtermidiate-coin (SIN) is the debt in a BNB-backed Collateralized Debt

Position (CDP), similar to DAI. Although SIN is an independent ERC20 token, most users do not need to use SIN directly, except for the case of Coupon.

FOXS



FOX Share (FOXS) is the utility token in FOX Finance. You can use FOXS in various ways:

- Deposit BNB and Burn FOXS. In other words, burn FOXS with SIN to mint FOX.
- Earn FOXS (and BNB) by redeeming F0X.
- Earn FOXS with a bonus by recollateralizing.
- Use FOXS to repay SIN. Or make a Coupon to repay debt in the future.
- You can stake FOXS to earn rewards and more FOXS per each future block.
- Or you can lock FOXS in some periods to get veF0XS for governance.

veFOXS

FOX Finance is a decentralized service. So, anyone can be a fox farmer who uses and owns FOX. Plus, a decentralized governance system among farmers is needed.

veFOXS is used for governance. If you lock F0XS in more periods, you can get more veFOXS, that is, more suffrage.



NFTs

TBD

Collateralized-Debt-Position

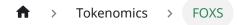
As known as CDP.

Coupon

Full name is Position-Discount-Coupon (PDC).

Governance

Kind of SBT.



FOXS

TBD

Distribution

Fair launch.

Airdrop

For DAI and FRAX users.



Governance

TBD

Global Liquidation



For Developers



TBD

How to Use

See FOX-contract for more details.

Intefaces

TBD

Please refer to GitHub.

How to Use

See FOX-contract for more details.

Requirements

```
$ npm install
```

Set .env

and/or envitest for test environment.

Now we can use pre-defined values as environment variable, with a command prefix dotenv -e .env.test --.

Deploy

\$ dotenv -e .env.test -- npx hardhat run scripts/deploy.js -network localhost



Roadmap

After the full implementation and numerous tests, FOX Finance will be launched through a fair method.

In addition, because FOX is inspired by DAI and FRAX, we are under consideration for airdrops for those service users.

Several feature updates are also scheduled to make the protocol more robust and convenient.

● Please keep an eye on FOX-Finance!

Liquid Staking

In the near future, we use Ankr's aBNBc token.

Requirements

- Minimum value to stake: 0.502 BNB (the 0.002 part is the relayer fee).
- Minimum value to unstake: 0.5 BNB.
- Unbond time: 7–10 days.

Fees

- Base fee: 10% of the Liquid Staking rewards as a fee.
- Relayer fee: 0.002 BNB.

• Unstaking fee: 0.004 BNB.

• Unstaking relay fee: 0.000075 BNB.



Security



Audit



Community



- WebApp

Treasury

External Links

- WebApp
- Twitter
- GitHub

Contact

• stablefox.finance@gmail.com

Treasury