CHFRY
Crypto Host Fiduciary
(Aka. Cheese Fry)

The CHFRY Team
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V1.0.0

Abstract

CHFRY is the DeFi protocol equivalent of fast food — its ecosystem powers tasty yields and satisfies cravings for multiple use cases. This is achieved by locking collateral within CHFRY — which supports the creation of synthetic yield-backed stablecoins, flash loans, and so on.

1 Background

The explosion of DeFi primitives, while breathtaking, has isolated core use cases into verticals that restrict capital efficiency and movement. There exists huge market demand to be addressed by a protocol that evolves and aggregates the following use cases:

1.1 Yield Based Debt

Alchemix Finance[1] pioneered the idea of combining yield aggregators (e.g. Yield Finance[2]) with collateral-based debt (e.g. Compound[3]). Instead of paying interest on over collateralized loans, why not use the interest earned elsewhere on that collateral to pay off the debt over time? The execution of this simple idea has been a hit among the DeFi community — this is a clear improvement over previous DeFi interest-bearing loans.

1.2 Flash Loans

Popularized by Aave[4], this form of lending is exclusive to only DeFi. Flash loans are instantaneous and unsecured, enabled by a smart contract code that reverses a lending transaction if the borrower is unable to fulfill borrowing obligations. Their use cases cover arbitrage, liquidation, and so on.

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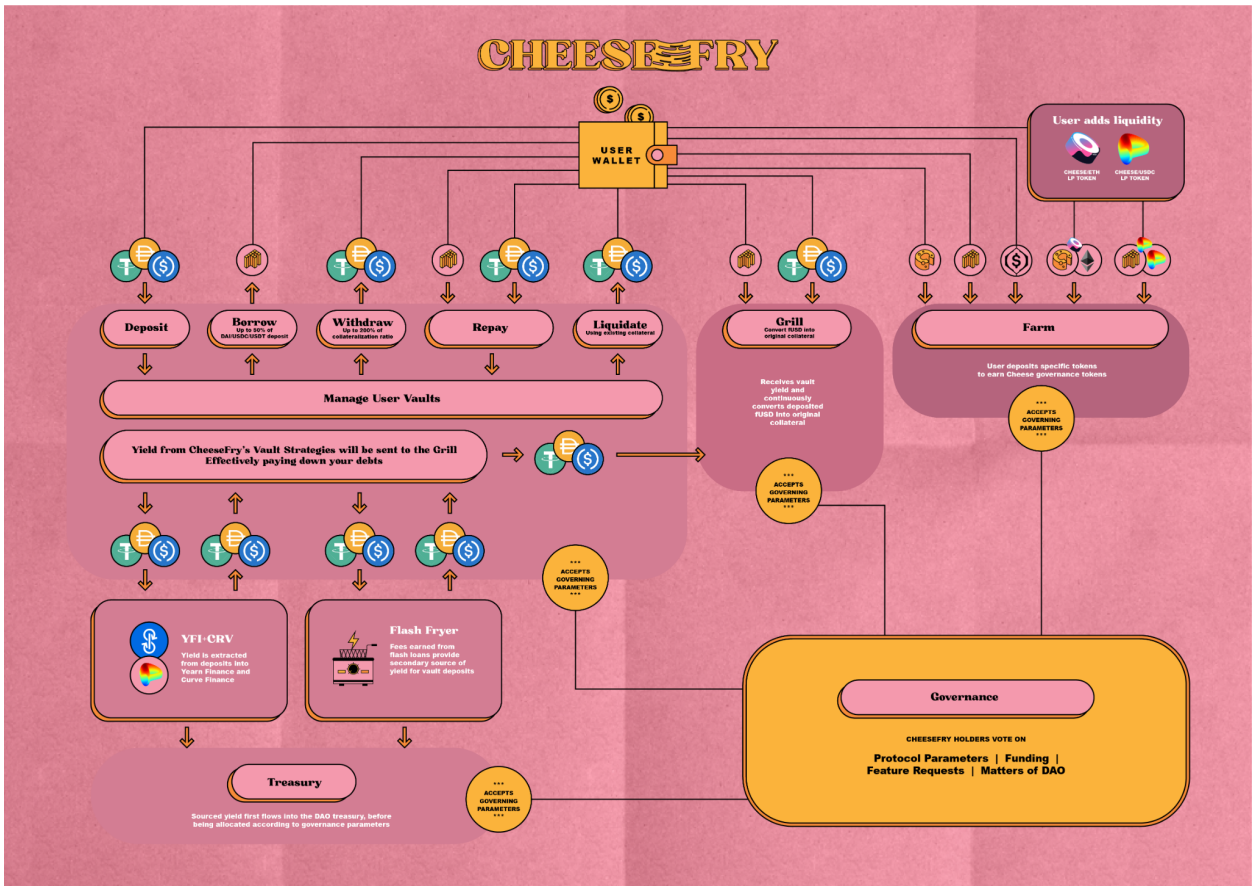
[1] Alchemix Finance https://alchemix.fi/
[2] Yearn Finance https://yearn.finance/
[3] Compound Finance https://compound.finance/
[4] Aave https://aave.com/

2 Overview of CHFRY v1 Ecosystem

The basic building blocks of the CHFRY ecosystem are yield-backed synthetic stablecoins, collateralized by USDC/USDT/DAI vault deposits by users.



2.1 Vault Depositors

i. In CHFRY v1, vault deposits will be deployed into best-in-class DeFi yield aggregators and utilized for flash loans — these power the automated repayment of debt over time within the CHFRY Oven.

ii. After depositing, users can mint up to 50% of their deposited amount (equivalent to 200% collateralization ratio), in the form of fUSD. fUSD is pegged at 1:1 to a basket of top stablecoin assets — ensuring its utility outside the CHFRY ecosystem. No interest payments are required from users from this point onward — their fUSD loan pays itself off.

iii. As debt gets paid off gradually with time, user vaults will become overcollateralized above 200%. At this point, users can mint more fUSD or withdraw USDC/USDT/DAI as desired, until their collateralization ratio reverts to 200%. This ensures maximum capital efficiency, eliminating the need for long lock-in periods.

iv. Users can also settle their debt early, using fUSD/USDT/USDC/DAI or any combination thereof.

2.2 Flash Fryer

i. Part of CHFRY's vault deposits will be set aside as collateral for flash loans, in what's known as the Flash Fryer. Borrowers can utilize these reserves for flash loan operations, in the same vein as Aave's offering.

ii. Vault depositors will earn fees on the flash loans. This will go toward the paying down of debt positions. More importantly, Flash Fryer fees will provide a natural hedge against scenarios whereby DeFi aggregator yields come down — while maintaining the integrity of vault deposits.

iii. Flash Fryer users will also see their yields enhanced by Cheese rewards (under Section 2.5).

2.3 fUSD-Stablecoin Basket Convergence Mechanisms

CHFRY enables multiple scenarios to ensure fUSD peg convergence to its underlying basket of stablecoins (USDC/USDT/DAI).

I. Oven

Yields generated by vault deposits are regularly harvested and swept into CHFRY's Oven. This gradually converts user-staked fUSD in the Oven into the underlying stablecoin basket. Users can burn staked fUSD according to how much has been converted into stablecoins. This ensures convergence between fUSD and the stablecoin basket, through the former being a bond that eventually matures into the latter.

Any user's staked fUSD in the Grill pool, if already overfilled, can be force-converted and the surplus collected by the force-converter, or spread across all other fUSD stakers if the force-converter is not currently staking fUSD.

II. Arbitrage Ensuring Peg Convergence

Should fUSD be trading below any of the stablecoin basket constituents, there exists an exploitable inefficiency in that users can buy fUSD off secondary markets and use that to repay their vault debt. Should the converse be true — users can mint more fUSD and sell it for the respective stablecoin basket constituents.

Through the above arbitrage incentives, the fUSD peg is expected to maintain stability at 1:1 vs all stablecoin basket constituents.

III. Incentivized Stablecoin Liquidity Providing

Through farming and trading fee incentives, liquidity providers (LPs) will be incentivized to provide liquidity to fUSD-Stablecoin Basket AMM pools. This effectively increases conversion speed within the Grill pool, while ensuring a greater portion of fUSD issuance is utilized in CHFRY ecosystem-building and improved attractiveness of fUSD as collateral outside of CHFRY.

2.4 Management of Harvested Yields

85% of harvested yields will be utilized toward the maturing of debt positions.

15% of harvested yields will be allocated toward protocol fees, out of this 15%:

- 45% will be distributed into the CHFRY Treasury
- 25% will be used for buyback of Cheese tokens
- 30% will be distributed as farming rewards

The Treasury will be governed by the CHFRY DAO, where Cheese holders will have direct input on the allocation of Treasury funds. It is our core team's vision that Treasury funds will be used toward the expansion of the CHFRY ecosystem within the overall DeFi space. Potential use cases include developer grants, external dApp integrations and so on.

In the initial launch phase, the CHFRY team will have control over the treasury through a multisig wallet. The eventual desired outcome is to have the CHFRY DAO taking over reins of the Treasury.

2.5 Token Distribution and Cheese Farming

Total Cheese token issuance will be under the following parameters:

Fixed Max Supply = 9,313,200 tokens
Emissions Schedule = 75000 in week 1, 390 decrease per week. This will go on for 156 weeks. At week 157 onwards, rewards will cease indefinitely.
Buyback tokens can be released after total token supply has been issued, under discretion of the CHFRY DAO.
Team tokens will be vested over 2 years at monthly intervals, starting from the 4th month post-launch.

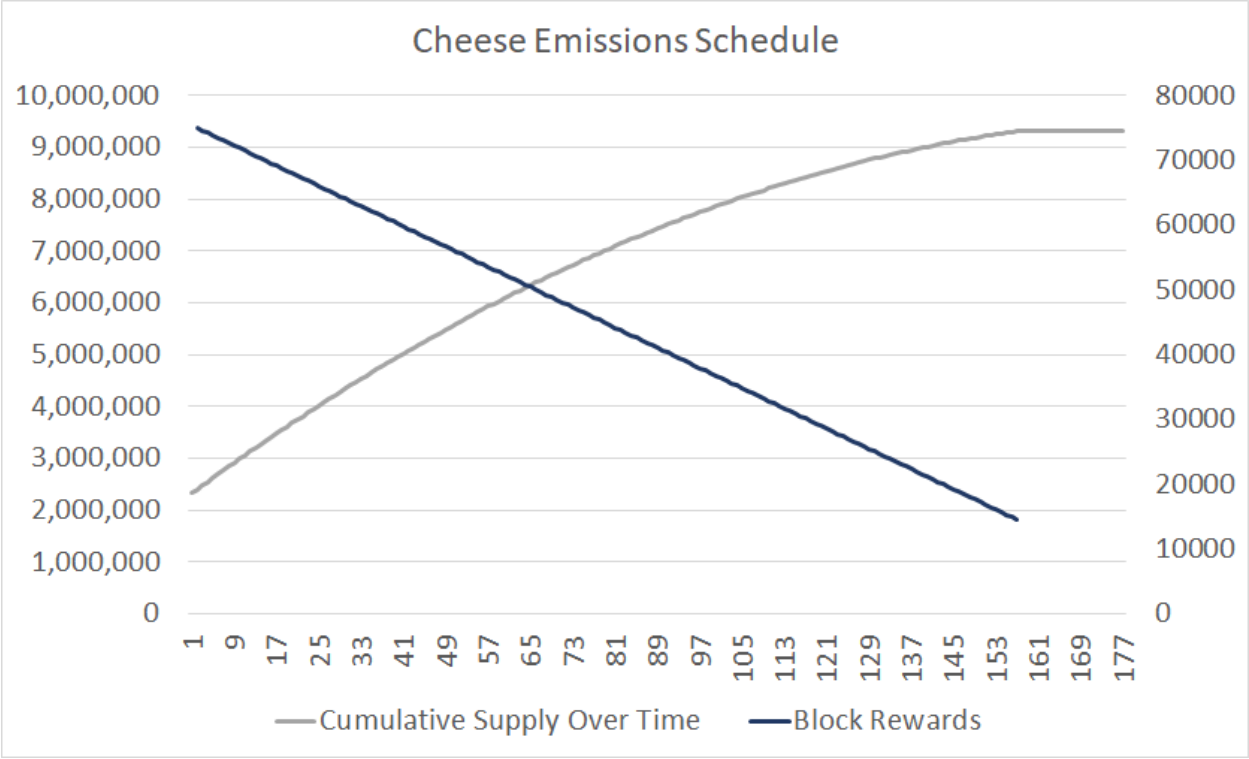


Chart Parameters:

Left y-axis= Cumulative Tokens Issued

Right y-axis = Block Rewards per Week

X-axis = Number of weeks from launch

Tokens will be distributed as follows:

For Internal Ecosystem Building (25%), under security of multisig wallet:

9.5% - DAO Bootstrapping

4% - Bug Bounty Program

10% - Team

1% - DEX Liquidity Pool Bootstrapping

0.5% - Airdrop & Community Building

For Participant Rewards:

75% - Farming Rewards

To ensure robust protocol development in its early days, early participants can earn rewards in Cheese tokens, which offer governance voting rights within the CHFRY ecosystem.

75% of total Cheese issuance will be allocated as diminishing block rewards over a 3 year horizon. Of this 75%,
8% will be allocated under an internal staking pool for team
57% will be allocated under staking rewards for LPs and fUSD / Cheese stakers
10% will be allocated for Flash Fryer rewards for flash loan users

3 Governance

CHFRY's governance process will be multi-pronged, with full decentralization as the final goal.

3.1 Informal (Soft) Governance Process

In the community Discord and Forum, there will be separate channels to discuss token swaps, protocol roadmap, governance modifications, and grants.

Ideas that garner enough community support can be submitted for voting. A community member may draft a soft proposal for Snapshot for an official community vote. Such proposals act as a "temperature test" or a poll, but do not guarantee implementation. The idea needs to be adopted by a development team, with finalized code audited and submitted via the formal governance process (below).

3.2 Formal Governance Process (Hard, with executable code)

CHFRY's initial governance utilizes Gnosis Snapsafe - process below:

- Executable code (i.e. for transfer of assets) and be submitted for voting on Snapshot;
- Cheese token holders can vote yes or no;
- There are requirements for quorum and vote success;
- The results of the vote will be pushed off-chain to on-chain oracle reality.eth, and an escalation or challenge process will begin;
- If successful the code will automatically execute to transfer treasury assets.

3.3 Future Governance

Gnosis Snapsafe is an off-chain to on-chain governance system that is primarily used to control the transfer of treasury assets. As CHFRY matures, we imagine that we will upgrade to a full on-chain governance system. This will give more control to Cheese holders to control governance parameters and protocol parameters, such as new vault strategy integration.

For safety reasons the Project Group shall own the MultiSig keys for Internal Ecosystem addresses. The medium-term goal is to move these to new addresses that will only be controlled by the DAO module.

4 Looking Ahead

CHFRY seeks to go beyond the groundwork that Alchemix has laid out in the real-world viability of yield-backed synthetic assets. By diversifying sources of yield through the proliferation of multiple use cases within the CHFRY ecosystem, the protocol has far greater long-term robustness on a standalone basis. Plans for the future include multi-chain interoperability and leveraged yield farming — among other initiatives to spur value accretion toward the broader DeFi ecosystem.