Finle Stablecoin Protocol 1.0

Sonny Bombhore | hello@finle.uk

November 2023

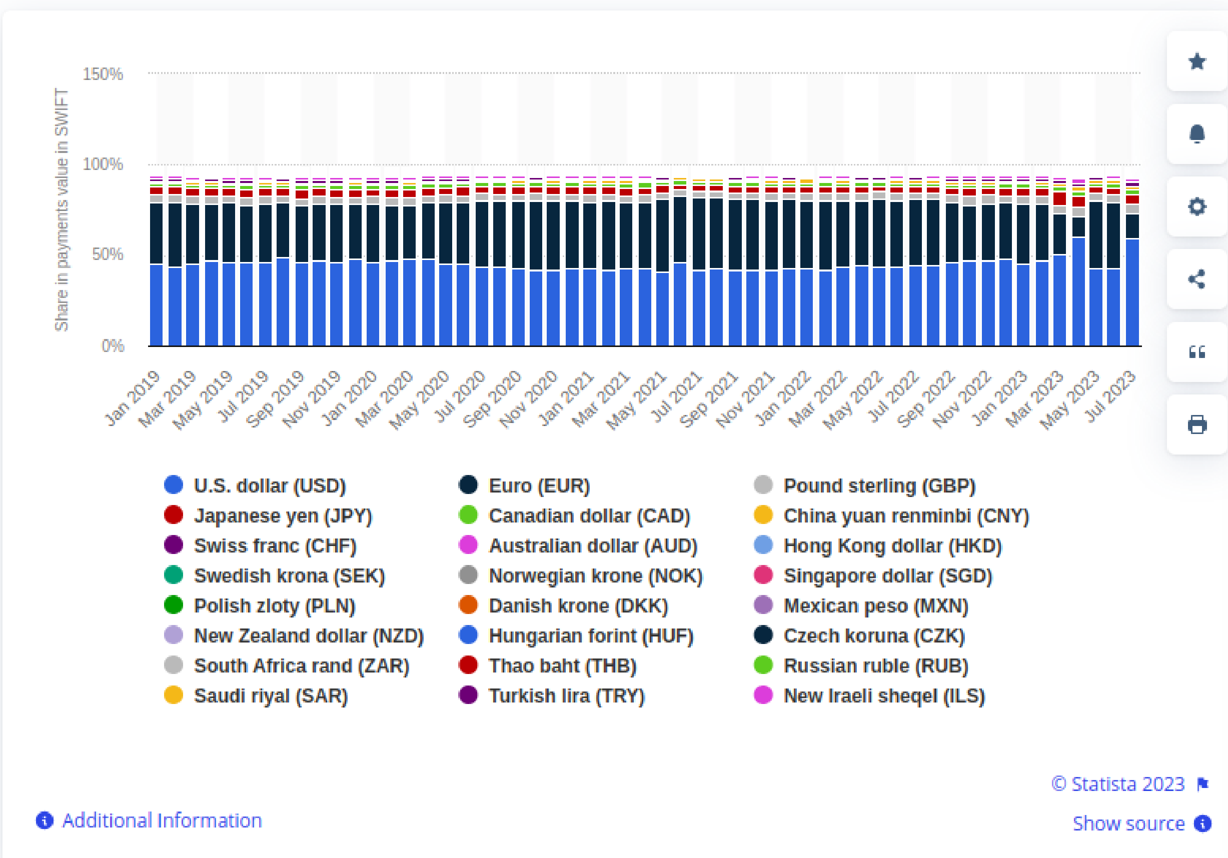
Abstract

Finle Money is a suite of crypto stablecoins secured by other liquid cryptocurrencies, called the base currencies that are pegged 1:1 with a fiat currency. The Finle Stablecoins are built upon the native Finle Stablecoin Protocol, which defines the properties and usages of these stablecoins and governs their application, circulation and updates.

Introduction

Finle Money is focused on creating multi-currency digital stablecoins secured by a suite of world's top reserve currencies, primarily the USD and EUR. The primary focus is the diversification of the user or investor portfolio. Investors can use the reserve currency for buying into a multi-currency basket as well as making safe and secure cross-border payments and entering into various types of financial contracts.

Why USD and EUR are used as Reserves for the peg



The United States Dollar has always been the world's reserve currency and primary means of settling cross-border payments. According to Statista, a reputable financial data source, as of September 2023 over 60% of the world's payments are still settled in the U.S. Dollars and approximately 12% is settled in Euros. Together they account for nearly three quarters of the world's payment settlement making them a preferred choice of reserve currencies.

Availability

The Finle Stablecoins are available on Ethereum Blockchain backed by USDC and EURC stablecoins as well as Binance Blockchain backed by BUSD cryptocurrencies.

Stability

When it comes to backing up a stablecoin with another asset, the risk associated with the base asset that holds the security of the peg is perhaps the most important consideration, especially the risks of volatility. That being said, stablecoins backed by volatile cryptocurrencies such as BTC or ETH may pose a significant challenge and risk management while stablecoins backed by commodities are a lot less volatile. However stablecoins backed by deposits of fiat currencies with a reputable custodian such as a regulated bank or government treasury bonds are generally considered most stable and secure as the fiat deposit matches 1:1 to the minted tokens. The stablecoins issued by Circle (USDC and EURC) as well as Binance (BUSD) qualify on that note as both these companies maintain their fiat liquidity with reputable banks and custodians and maintain transparency and publish regular audits. As they both provide a great reserve stability and good risk management functions the Finle Protocol uses them to back up the stablecoin currency.

User Experience

What's different about the Finle Stablecoins is the focus on the user experience rather than just being held as another safe-haven investment. The protocol is focused on extending and evolving the usefulness of stablecoins and creating practical and useful decentralized financial applications. As they are pegged to the reputable fiat-based stablecoins and come with good risk management, which saves substantial work upfront, the focus is on applications.

Current Solutions

The current stablecoin solutions are largely concentrated around holding a safe-haven portfolio against crypto volatility. Some have provided add-on features for payments and investment related applications. Although these features are highly beneficial they also highlighted ways that Finle could further enhance and improve upon those design models and features.

Attributes

The Finle Stablecoin Protocol provides the 3 basic and fundamental natural money properties that act as foundation for any natural fiat currency:

- **Unit of Account:** Provides the holder a Unit of Account for the purposes of valuation of goods and services, payments and investments.
- **Store of Value:** Provides the holder a way to store the value associated with the stablecoin and allow the value to be invested for a return.
- **Medium of Exchange:** Allows the holder to use it as a way of payments and for purchases of goods and services.

Applications

The Finle Stablecoin Protocol defines 4 natural money usages and applications:

- **Payments and Remittances:** Allows the holder to make P2P payments and remittances without the need for intermediaries.
- **Purchases:** Allows the holder to make purchases of goods and services.
- **Investments:** Allows the holder to invest the coins for a return and trade those investments by creating various forms of investment contracts.
- **Lending:** Allows the holder to create lending contracts for specific rates of interest and issue the contracts to the borrowers.

All Finle Money apps are designed around these fundamental usages.

Governance

The Finlé DAO acts as the governing body for this protocol and issuance and governance of Finlé Stablecoins. The DAO tokens are issued to individuals and organizations who make a significant contribution to the Finle DeFi Project and are able to vote on the on-going changes as well as the future of this project. The first set of governing tokens are issued to Finle Money, the creator of Finle DAO and the Finle Stablecoin Protocol. As more creators and contributors join in, additional tokens are minted and issued to them making the governance truly community based.

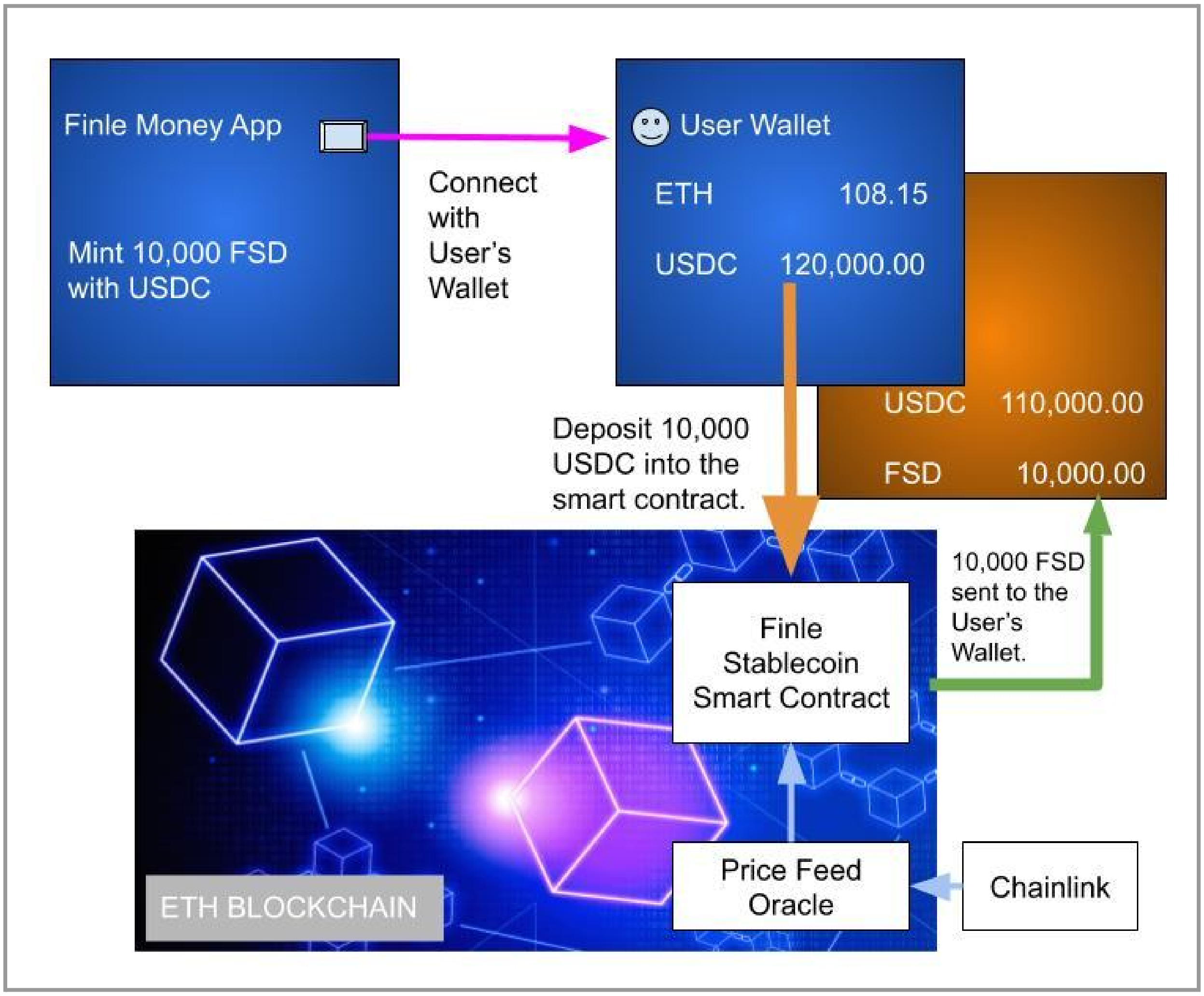
Decentralization

The Finle Stablecoin Protocol operates on the Ethereum Decentralized Network with no intermediaries. Smart contracts are responsible for the creation, operation, payments and transfers of all stablecoins and associated financial contracts created with this protocol. Finle Money acts as the operator of this protocol and the decentralized network. Users and investors freely interact with the stablecoin smart contracts without the interference of Finle Money or any other intermediary. All transactions are verified, validated and confirmed by independent validators across the blockchain.

Collateralization

The protocol provides for 1:1 collateralization of the stablecoins with these base currencies: USDC, EURC and BUSD. Additional base currencies may be added in future. For example, if an investor wishes to mint 100 units of USD stablecoins from the protocol, they would provide 100 units of USDC as collateral, which are then sent to the collateral pool. If the investor decides to withdraw or cancel the collateral, they would burn or redeem the stablecoins back to the protocol and receive the original USDC they provided at the time of minting at the current rate provided by the price feed oracles.

Minting and Burning

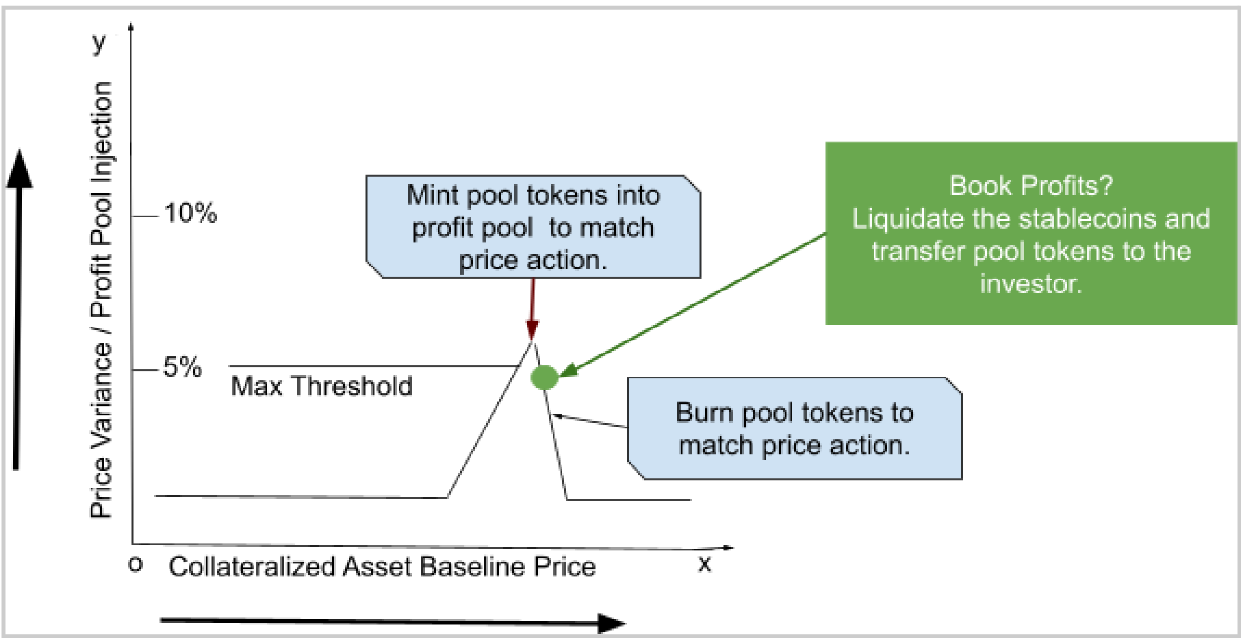


(The process is reversed for burning the coins back to the protocol.)

The Finle Stablecoins are mintable (issuable) and burnable (redeemable) at the current rate of the collateralized asset provided by the price feed oracle.

Investor Rewards - Finle Pool Tokens (FPT)

The Finle Stablecoin Protocol rewards its stablecoin holders (regardless of the designated currency) with Finle Pool Tokens that are automatically minted into two separate pools - ***the floating profit pool and the floating loss pool*** - in the event of price swings of the collateralized asset in either direction. The number of tokens minted is always equal to the price variance of the pegged asset. In other words, given the 1:1 price peg the unit price of the stablecoin is always 1, and a price variance in the base currency will trigger the minting of the FPTs to match the variance. The rewards are issued to the investor during profit booking as a result of a hike in the price of the collateralized asset as well as to compensate the investor for losses in the event of a stop loss liquidation. **In short, investors are rewarded just for minting the Finle stablecoins from this protocol.** The FPTs are standard ERC-20 tokens that are tradable on decentralized as well as centralized exchanges. Once listed, the price of the pool tokens are determined by the market price action.



For example: If the investor minted 100 FSDs by collaterizing 100 USDC at 1:1 and the USDC rises in value by 1%, the protocol will mint 1% of 100 or 1 token into the profit pool to keep the 1:1 peg between FSD:USDC. If the investor decides to book profit by liquidating his position, the protocol will liquidate the position and send back the 100 USDC plus 1 pool token to the investor as a reward.

Price Feed Oracles

The protocol allows the usage of off-chain price feed oracles for determining the current price of the collateralized asset as well as calculation of the current value of the stablecoins when pegged to the collateralized asset.

The price peg always resolves to 1.

$$p = \frac{balanceOf(mintedCoins) + balanceOf(profitPool) - balanceOf(lossPool)}{totalValueOf(Collateral)}$$

Examples:

a. If there are 100 FSDs minted coins against a collateral of 100 USDC and the value of each USDC remains at 1:

p = (100 (minted coins) + 0 (price up) - 0 (price drop) / 100 = 1

b. If the value of USDC goes up 3% making it 1.03:

3% or 3 FPTs are released into the profitPool. Therefore:

p = (100 (minted coins) + 3 (price up) - 0 (price drop) / 103 = 1

c. If the value of USDC drops by 3% making it 97 (0.97 per USDC):

3% or 3 FPTs are minted into the lossPool. Therefore:

p = (100 (minted coins) + 0 (price up) - 3 (price drop) / 97 = 1

Risk Management, Mitigation and Liquidation

The risks involved with issuance of the stablecoins and subsequent applications of these stablecoins are largely attributable to the collateralized asset although there are localized risks associated with how these stablecoins are used, for example, when lending or creating an investment contract. The most fundamental risk is the sudden and drastic fluctuation in the collateralized asset. As the protocol already uses a fiat-based stablecoin as a collateralized asset, the risks are generally considered low and the risk management essentially lies with the provider of the collateral. However, this protocol provides a way to mitigate the “spillage” of risks into the right side of the equation by establishing a maximum risk-reward threshold of 5%. That translates into the following two essential scenarios: Profit Booking and Stop Loss.

a. **Stop Loss**: If the value of the collateral drops below the baseline of the pegged value then the protocol begins to mint the FPT pool tokens into the loss pool. If the asset price drops below the 5% threshold then the stablecoins are automatically liquidated and burned back into the protocol, and the collateral is released back into the user's wallet at the current price provided by the price feed oracle along with the FPT pool tokens from the loss pool.

b. **Floating Profit Pool**: If the value of the collateral climbs above 5% of the pegged value then the protocol will release additional stablecoins into a floating pool to match up with the new value of the asset causing a temporary floating profit. That being said, if the value drops below the upper threshold of 5% the additionally minted stablecoins are burned back from the floating pool.

Profit Booking with FPT

Investors are able to take profit from the Floating Profit Pool that results in the event of a climb in the value of the collateralized asset above the baseline. In the event the investor decides to redeem the stablecoins back to the protocol, the protocol will burn the stablecoins and release the collateral to the investor as well as the earned profit by way of Finle Pool Tokens (FPT.)

For example: The investor holds 100 FSDs pegged to 100 USDCs 1:1, and the value of USDC goes up by 1%. The investor decides to redeem FSDs back to the protocol to book profit. The protocol will burn back the 100 FSDs + the 1% that was released into the Profit Pool, and release the USDCs back to the investor. It then releases FPTs that match the 1% increase in profit pool, in this case, 1 FPT token, to the holder.

Stop Loss with FPT

In the event the price of the collateralized asset goes below the baseline, the investor has the ability to trigger stop loss and liquidate the position. If the investor chooses not to trigger a stop loss redemption and the price drops below the 5% maximum threshold, the protocol will be forced to liquidate the stablecoins and send the base currency back to the investor at the current rate set by the price feed oracles along with the minted reward tokens from the loss pool.

For example: The investor holds 100 FSDs pegged to 100 USDCs 1:1 and the value of the USDC goes down by 3%. The investor decides to trigger a stop loss and decides to redeem the FSDs back to the protocol to minimize the losses. The protocol will burn back the 100 FSDs and return the USDC along with the FPT pool tokens from the loss pool to the investor.

Transaction Fees

The protocol levies a minting and withdrawal fees of 0.1% of the value of stablecoins. When minting the transaction fee is first deducted from the collateral asset followed by the minting. When withdrawing the transaction fee is deducted from the collateral asset before sending it back to the holder.

Emergency Shutdown

In the event of an emergency shutdown, all Finle stablecoin holders are allowed to claim collateral for each token at the last price reported by price feed oracles. The burnAll function is activated allowing the token holders to redeem the stablecoins in exchange for their collateral.

The Finle Money App

The Money App allows users to mint, manage, swap, trade, invest, lend, pay and enter into financial contracts as provided. The app directly connects with the user’s wallet. As this is truly decentralized no personal information is collected while using the app.

Disclaimer

This whitepaper is for general information purposes only. It does not constitute investment advice or solicitation to buy, sell or trade the stablecoins and should not be used as a basis of merit for evaluation and making any investment decisions. It should not be relied upon for accounting, tax or any other kind of financial advice. This paper reflects the current opinion of the author on behalf of Finle Limited, UK and does not represent or constitute a legal opinion in any jurisdiction. This paper and the opinions reflected here are subject to change without being updated.