

# Fortress

## FORTRESS CREDIT AND LENDING

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ALGORITHMIC MONEY MARKET  
-AND-  
SYNTHETIC STABLE COIN PROTOCOL

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# TABLE OF CONTENTS

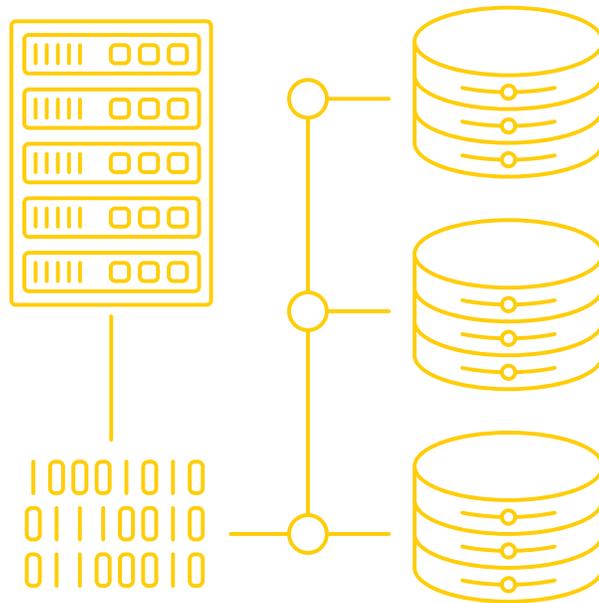
Abstract	3
Fortress Protocol	4
Supplying Assets	5
Borrowing Assets	5
Liquidation	6
Interest Rates	6
Collateral Value	6
FAI Stablecoin	7
Governance	7
Tokenomics	8
The Team	9
Contact & Resources	9

## ABSTRACT

Fortress Credit and Lending (“Fortress”) is an algorithmic money market and synthetic stable coin protocol designed to bring secure and trustless credit and lending to users on Binance Smart Chain (“BSC”).

Fortress enables investors to lend and/or borrow cryptocurrencies by pledging the platform an over-collateralized amount of cryptocurrency. This provides investors with the ability to lend assets and earn a compounded annual percentage yield (“APY”) that is paid for by the borrowers. Fortress does this by utilizing money markets, which are pools of assets with algorithmically derived interest rates based on the supply and demand of each asset. Investors can lend or borrow assets on Fortress and earn or pay interest without ever needing to negotiate anything such as the maturity date, interest rate, or collateral with a peer or a third party. Fortress takes this one step further by introducing a synthetic stablecoin, FAI. By providing assets to the protocol, investors will not only earn compounded interest, but will also be given the ability to mint stablecoins up to a safe amount for both parties, which is used as a credit line provided to users while their assets are supplied on Fortress. Fortress is able to do this because of the massive enhancements BSC is able to provide to decentralized finance dApps, such as nearly immediate and extremely cheap transactions, deep liquidity and the ability to wrap a vast array of tokens like BTC, ETH and more.





## **FORTRESS PROTOCOL**

The Fortress protocol was designed to securely and efficiently enable users the ability to borrow and lend cryptocurrency assets. Users who choose to supply liquidity to Fortress earn compounded interest as rewards for supplying their assets to the protocol. When supplying assets, users are also given the ability to mint stable-coins, or borrow other assets against their supplied assets.

Once assets are supplied to Fortress, users can then borrow assets or mint stable-coins by over-collateralizing and paying interest on the amount borrowed per block. Loans from the Fortress protocol do not have monthly payments or late fees, and can be paid off at any time. Fortress is able to do this without ever requiring a credit check, and with near immediate origination, by using smart contracts that provide an automated and absolutely transparent system for investment and profit distribution.

Fortress unites investors, borrowers, exchanges and others into an open and fair platform that empowers users, unlocks billions of dollars of value, corrects market inefficiencies, and offers tremendous potential to investors and users alike.

In a future Fortress protocol update users will be able to spend FTS tokens to reduce the interest rate when borrowing, or increase the interest rate when supplying. This mechanism will greatly empower our users to fine-tune their investments to their own personal time-scales by allowing the user to choose how much FTS they want to spend to modify their interest rate. An example of how this is done traditionally is when people choose to spend money to buy down the interest rate on their mortgage.

## SUPPLYING ASSETS

Fortress Protocol gives users the ability to earn compounded interest by supplying various cryptocurrency assets that can then be used as collateral for a loan, supplied as liquidity, or to mint stablecoins. Assets that are supplied as liquidity on Fortress receive compounded interest from every block that is produced.

On a peer-to-peer platform or on an exchange, users' assets are traditionally matched with others before a transaction occurs, causing excess costs and time lost. Fortress has improved on this market inefficiency by aggregating users' assets, and making assets fungible. By pooling assets, this process is able to provide much more liquidity than other platforms (unless all of the assets in a money market are borrowed), as well as gives users the ability to withdraw their assets at any time.

This is done in a clever way, by utilizing Fortress fTokens. Assets that are provided to a certain money market are represented by the lower case 'f' denomination. The fToken system enables users to tokenize their assets and freely move the fTokens around to cold storage, other wallets, or other users. After supplying BTC, for example, users will receive fBTC, and they will need the fBTC in order to redeem the BTC collateral when ready to withdraw.



## BORROWING ASSETS

Fortress users can choose to borrow assets, but must first supply collateral to the protocol. When borrowing assets, users must be over-collateralized on the loan, meaning the maximum loan to value ("LTV") of the supplied assets must be no greater than the maximum allowed collateral ratio for each money market.

Fortress gives investors the ability to use their fToken collateral to borrow assets from the protocol instantly. Loans can be paid off at any time, there are no maturity dates, and there are never any trading fees, slippage, monthly payments, or late fees. To pay the loan back and retrieve their collateral, borrowers must pay off the entire origination balance, as well as any compounded interest that accrued during the life of the loan.



For example; If a user supplied \$1,000 in BTC to the protocol, they will be allowed to borrow up to the max collateral ratio for BTC, which for example is 70%. This means that the user would supply \$1,000 BTC, immediately begin earning compounded interest and be given the ability to mint or borrow \$700 more in assets.

# LIQUIDATIONS

The term liquidation simply means selling assets for cash. Forced liquidation means that this selling happens automatically when certain conditions are met. In the context of cryptocurrencies, forced liquidation happens when the investor or trader is unable to fulfill the margin requirements for a leveraged position.

When borrowing from Fortress, if the borrower's collateral value drops below the max collateral ratio, they could then be force liquidated and charged a liquidation fee before receiving any remaining collateral that may exist. The liquidation fee exists to incentivize traders to manually close their positions before they'd have to be automatically liquidated. A liquidator in this example would be incentivized to liquidate the collateralized position.

Each individual money market may have its own max collateral ratio. When choosing to borrow assets from Fortress, the higher the ratio of amount borrowed to the collateral value, the higher the risk of liquidation. If an asset allows a max collateral ratio of 70% and a user decides to borrow the 70% max, the value of the supplied collateral only needs to fall 30% before the user is liquidated.

## INTEREST RATES

Traditionally the interest rate is something that is negotiated and set based upon many different factors. Fortress implements an interest rate model which is applied to all lenders and borrowers uniformly by utilizing an algorithm that achieves an interest rate equilibrium based entirely on supply and demand.

Sound economic policy would tell you that interest rates should increase as a function of demand; when demand is low, interest rates should be low, and when demand is high, interest rates should be high.

Because of this, there are dynamically set interest rates on both the supply side as well as the borrow side of each money market on the protocol. Because the protocol can't guarantee liquidity, it utilizes the Fortress interest rate model to increasingly incentivize adding liquidity in times of high demand, when liquidity is at its lowest.

## COLLATERAL VALUE

When a user supplies, borrows, or mints assets on the protocol, the assets are assigned fTokens that are given a monetary value pulled from price oracles. This pricing data provided by the price oracles is transparent and verifiable, and because of the extremely fast and cheap transactions on BSC, the pricing data is also reliable. Fortress utilizes a mechanism to average out the prices over a set time to prevent any exploits.



## **FAI STABLECOIN**

FAI is a decentralized, collateral-backed stablecoin cryptocurrency that is soft-pegged to the US dollar and backed by a basket of cryptocurrencies.

Fortress protocol will enable users to mint FAI based on the amount of collateral a user has supplied to the protocol. Users can mint FAI tokens up to 50% of their supplied collateral balance (fTokens), and because FAI is a BEP-20 token, users can do what they would like with their FAI, such as staking it for more FTS tokens or adding it back into the platform as liquidity for more rewards.

Because FAI is a synthetic stablecoin and not backed by USD, it relies on market forces, cryptocurrency collateral, and other safety mechanisms to maintain a healthy and stable price near \$1. The market is incentivized to maintain a stable peg; however, if there comes a time that the price isn't stable, a governance proposal can be passed to activate the Fortress Price Adjustment Module that can change parameters within the FAI stablecoin system to modulate supply and demand and return the price to peg.

## **GOVERNANCE**

Fortress was built to adapt to market conditions using its governance system that allows FTS token holders to vote and decide on changes to the platform. FTS token holders can create proposals and use their FTS tokens as voting power when proposals are up for a vote.

The powerful governance system is able to modify parameters such as adding new cryptocurrency assets to the platform to be used as collateral or to borrow, adjusting interest rate models, and many other protocol enhancing measures.

Once a proposal has been created the candidate proposal will be voted on for three days. If the proposal passes, a two-day timelock will occur before the changes are made to the platform. This allows the platform to adapt while also giving investors peace of mind that the platform won't change without sufficient notice.

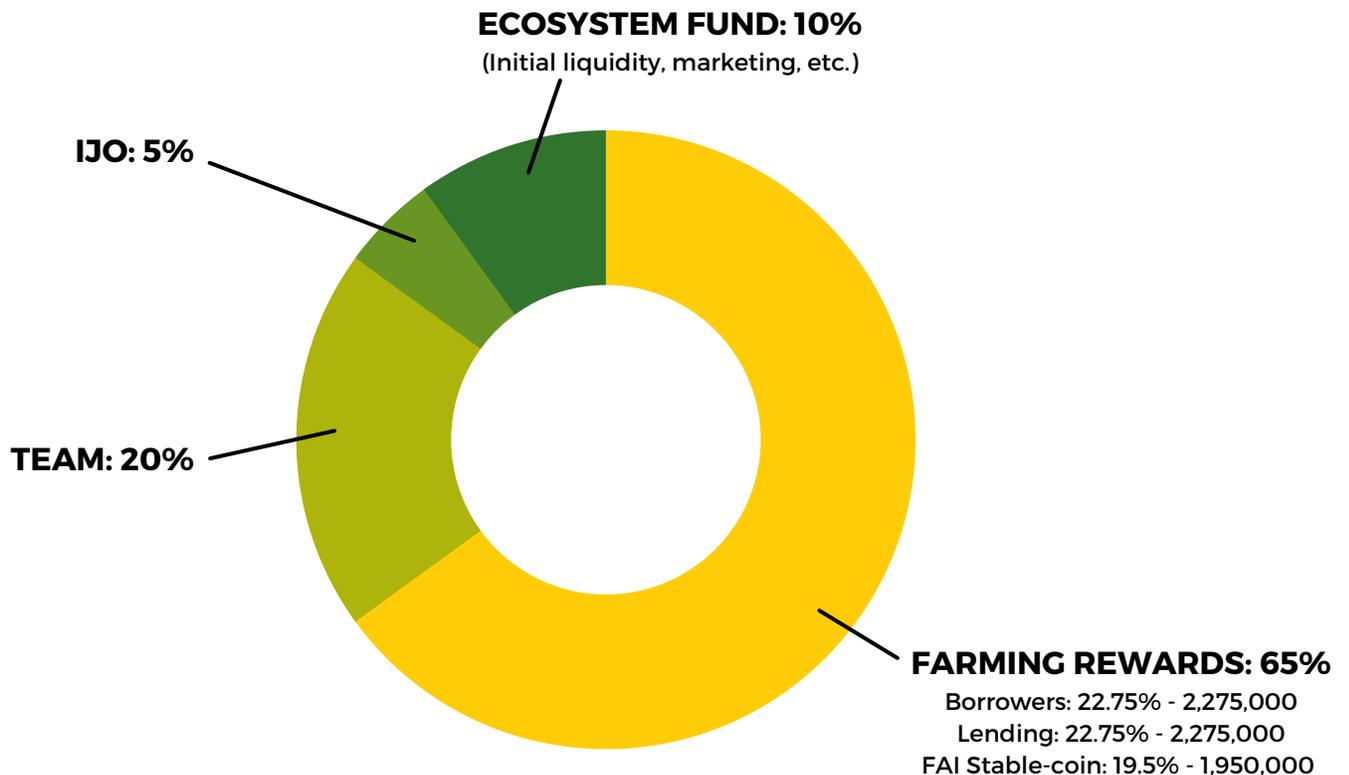
# TOKENOMICS

The Fortress protocol is governed by the FTS token. The FTS token is launched with a small public sale to bootstrap liquidity. Suppliers, borrowers, and stablecoin minters earn FTS rewards every block.

Fortress token, FTS, will have a max supply of 10,000,000. The tokens will be distributed over a two and a half year time-span. There will be 0.2473363775 tokens emitted per block, which works out to about 7123.287671 FTS emitted per day.

Team tokens vest weekly over a 6 month period. The token emissions will be allocated in the following manner:

- **Farming Rewards: 65% - 6,500,000**
  - Borrowers: 22.75% - 2,275,000
  - Lending: 22.75% - 2,275,000
  - FAI Stable-coin: 19.5% - 1,950,000
- **Team: 20% - 2,000,000**
- **Initial Jetfuel Offering (IJO): 5% - 500,000**
- **Ecosystem Fund: 10% - 1,000,000 (to be used for initial liquidity, marketing, etc.)**





## THE TEAM

Fortress protocol was created by Jetfuel Finance. We are a very experienced team composed of 10 seasoned entrepreneurs, solidity developers, full stack developers, designers, project managers, and marketers. We have over 30 combined years of experience in blockchain and DeFi, and have launched projects that have created millions in value for their respective token holders.

**Website:** <https://jetfuel.finance/>

**Twitter:** <https://twitter.com/Jetfuelfinance>

**Telegram:** <https://t.me/jetfuelfinance>

**Medium:** <https://medium.com/@jetfuelfinance>

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