

Multiplier Protocol

Simplified Stable Bonds (SSB)

Version 2.0

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<https://multiplier.finance/about-us>

Table of Contents

1. Introduction	2
2. Multiplier Protocol.....	2
2.1 MXX Utility	2
2.2 Simplified Stable Bonds (SSB) Contract	3
2.3 Simplified Stable Bonds (SSB) Contract Creation.....	3
2.4 MXX Token Burn Mechanism.....	5
2.5 Early Redemption	5
2.6 Open Market.....	7
2.7 Governance.....	8
3. Implementation and System Architecture.....	8
3.1 Implementation System Architecture.....	8
3.2 Price Feeds.....	10
4. Token Economics	10
5. Roadmap.....	11
6. Official Wallet Addresses	11
7. Disclaimers	12

1. Introduction

Decentralized Finance (DeFi) is the merger of traditional banking services with decentralized technologies. Essentially, it involves a brand-new monetary system being built on public blockchains. Decentralization means that there is not a single point of failure, as identical records are kept across thousands of computers through a peer-to-peer network.

Decentralized finance leverages on several key principles of the Ethereum blockchain

- Huge and diverse range of ERC-20 digital assets.
- Over USD 50 billion combined market cap of Ethereum ecosystem as of Q3 2020.
- Utilising smart contracts to provide a fully secure, transparent and open decentralized financial system.

With skyrocketing Ethereum fees and the exorbitant costs of interacting with DeFi smart contracts, the MXX protocol was designed to mitigate these gas fees through utilising ultra-efficient coding and optimisation architecture.

Multiplier introduces Simplified Stable Bonds (SSB) contracts, that offer the full benefits of bonds in a simplified version. Users with Ethereum/ERC-20 digital assets can supply their tokens to the Multiplier protocol through SSB contracts as a source of stable returns, without having to manage their assets, fulfill loan requests or take speculative risks.

2. Multiplier Protocol

2.1 MXX Utility

The MXX token represents ownership of the Multiplier ecosystem and is aggregated algorithmically according to liquidity contributed to the Multiplier platform, an application that facilitates the collateralisation where users can determine the tenure and interest rate on their underlying asset.

The MXX protocol is audited, decentralised, open-sourced and publicly available. This provides support of public oversight and scrutiny of the entire ecosystem.

MXX tokens are not pre-mined, and only minted through transactions that contribute to liquidity on the platform or a deposit that mints MXX tokens as a reward based on their underlying asset. Potential MXX holders are incentivised to mint MXX through transactions, and will have voting rights towards the governance of the network.

2.2 Simplified Stable Bonds (SSB) Contract

SSB Contracts mint MXX tokens, offering users a stable yield for their underlying assets.

Multiplier allows users to create their own SSB contracts where they can determine the tenure and interest rate that they want to earn on their underlying asset. Each SSB contract can have only one underlying asset. However, a user can create multiple contracts for different assets.

There are no restrictions as to the number of contracts a user can create, subjected to the availability of the remaining MXX tokens that can be minted.

2.3 Simplified Stable Bonds (SSB) Contract Creation

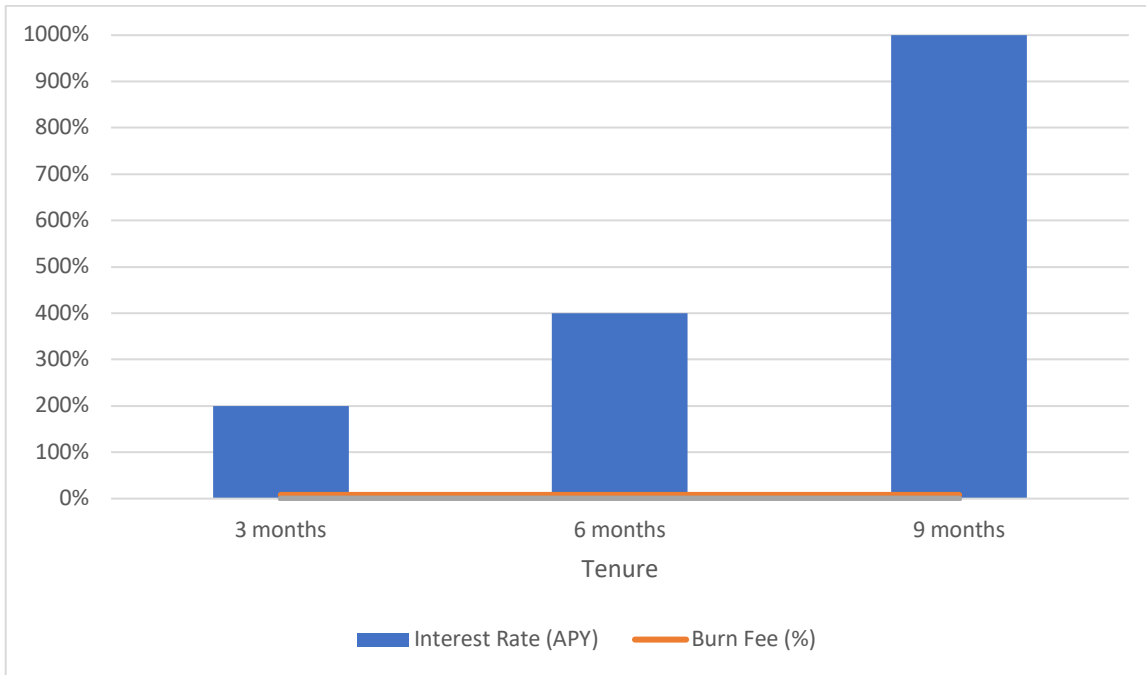
For each SSB Contract created, users will need to provide a burn fee in the form of MXX. This burn fee will be sent to an official burn address, thus reducing the total token supply of MXX. This burn amount is currently set at 8% of their MXX returns.

Tenure and Interest Rate is subjected to change and may vary.

Tenure	Day Count	Interest Rate (APY)	Contract Creation (MXX Burn Rate)	Effective Yield
3 months	90	200% p.a.	8%	184% p.a.
6 months	180	400% p.a.	8%	368% p.a.
9 months	270	1000% p.a.	8%	920% p.a.

Yield Chart

Multiplier®



All pictures shown are for illustration purpose only. Actual product may vary due to product enhancement

$$\text{Burn Fee Rate} = 8\%$$

$$\text{Burn Fee}_{MXX} = \frac{\left(\frac{\text{Asset} \times \text{Interest Rate}}{365} \times \text{Tenor}_{\text{Days}} \right) \times \text{Burn Fee Rate}}{\text{Price of MXX}^*}$$

*Refer to Section 3.2 Price Feeds

Illustration

John wants to create a contract with 25 ETH. He has indicated that he wishes his contract to have a 9-month (270 days) tenure at an interest rate of 1000% p.a.

Assuming the price of ETH is 400 USD and price of MXX is 0.05 USD

$$\text{Burn Fee Rate} = 8\%$$

$$\text{Burn Fee}_{MXX} = \frac{\left(\frac{10,000 \text{ USD} \times 1,000\%}{365} \times 270 \right) \times 8\%}{0.05 \text{ USD}}$$

$$\text{Burn Fee}_{MXX} = 118,356.16 \text{ MXX Tokens}$$

John has to pay 118,356.16 MXX tokens to create the contract. Upon maturity, John will receive his principal of 25 ETH plus interest of 1,479,452.05 MXX tokens.

*Underlying protocol formulas are not fixed and might be subject to changes.

<https://multiplier.finance/>

2.4 MXX Token Burn Mechanism

There are 2 types of burn fees in the Multiplier ecosystem.

- Burn fee during contract creation
- Burn fee during contract early redemption

The above burn fees are sent to the official burn address to be burned weekly, permanently reducing the maximum token supply.

This process happens in the following stages:

Stage 1: MXX is transferred to the official Burn Address **0x19B292c1a84379Aab41564283e7f75bF20e45f91**

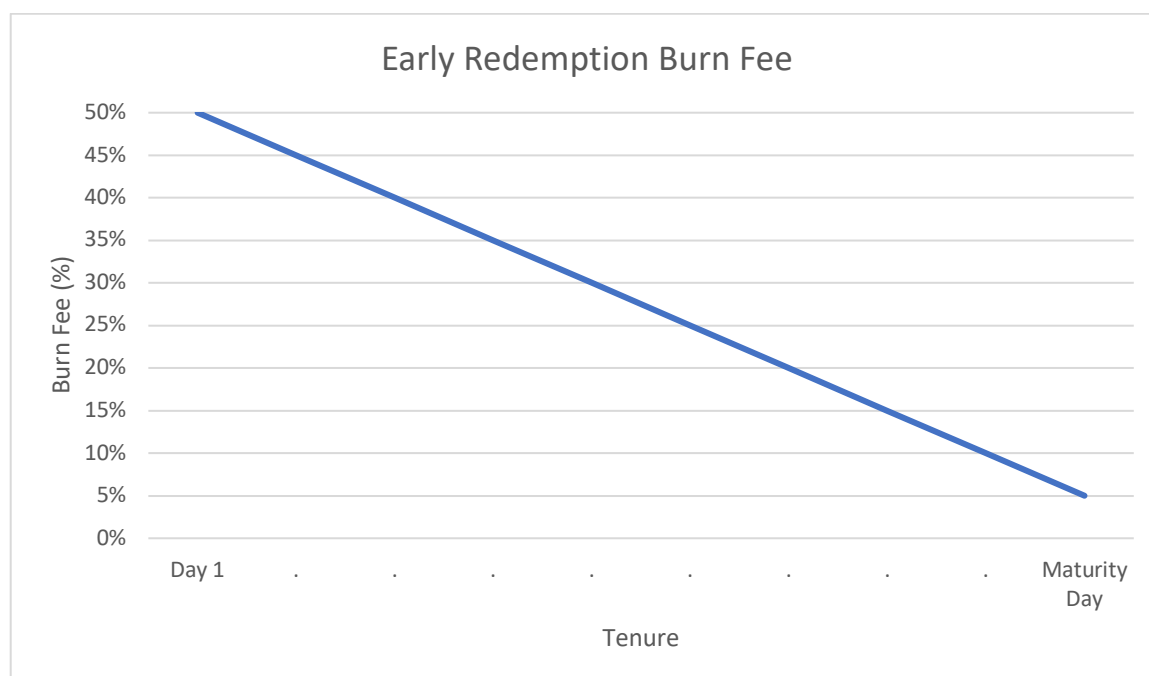
Stage 2: The MXX in the Burn Address is periodically burned and announced publicly.

Stage 3: The maximum supply of MXX tokens will be reduced accordingly on etherscan.io

2.5 Early Redemption

Users can choose to early terminate their SSB contracts prior to maturity. However, they will be subjected to a burn fee.

The Burn Fee is calculated on the percentage of the current MXX minted throughout the contract.



All pictures shown are for illustration purpose only. Actual product may vary due to product enhancement

Legend:

Let max = maximum burn rate = 50%

Let Min = minimum burn rate = 5%

Let Days = Day(s) into contract

$$\text{Burn Fee Rate} = \text{Max} - \left(\frac{\text{Max} - \text{Min}}{\text{Tenor}_{\text{Days}}} \right) \times \text{Days}$$

$$\text{Burn Fee Amount} = \text{Burn Fee Rate} \times \text{MXX minted so far}$$

Illustration

John has a contract with 25 ETH as underlying with a 9-month (270 days) tenure at an interest rate of 1000% p.a.

John will receive 1,479,452.05 MXX upon maturity. However, 3 months (90 days) into the contract, John wishes to early terminate his contract as he needs to utilize his ETH.

Assuming the price of ETH is 400 USD and price of MXX is 0.05 USD

$$\text{Burn Fee Rate} = \text{Max} - \left(\frac{\text{Max} - \text{Min}}{\text{Tenor}_{\text{Days}}} \right) \times \text{Days}$$

$$\text{Burn Fee Amount} = \text{Burn Fee Rate} \times \text{MXX minted so far}$$

$$\text{Burn Fee Rate} = 50\% - \left(\frac{50 - 5}{270 \text{ days}} \right) \times 90 \text{ days} = 35\%$$

$$\text{Burn Fee Amount} = 35\% \times 1,479,452.05 \text{ MXX} \times \frac{90}{270}$$

$$\text{Burn Fee Amount} = 172,602.74 \text{ MXX}$$

John will receive his principal of 25 ETH plus remaining interest of 320,547.94 MXX tokens.

**Underlying protocol formulas are not fixed and might be subject to changes.*

2.6 Open Market

SSB contracts that are early redeemed by previous users will be put up for listing in the Open Market. Users can choose to acquire these SSB contracts by putting up equivalent assets into the contract and continue to mint the remaining MXX in the contract till maturity. SSB contracts in the Open Market are on a first-come, first-served basis.

$$Effective\ Yield_{Annualized} = \frac{\left(\frac{Contract\ Remaining\ MXX\ x\ Price\ of\ MXX}{Asset\ x\ Price\ of\ Asset} \right)}{Remaining\ Days\ till\ Maturity} \times 365\ days$$

Illustration

After John early redeems his contract, the contract will be automatically available on the Open Market for other users to re-acquire.

The contract has a remaining tenure of 180 days (270 days – 90 days) and the MXX remaining to be minted is 1,479,452.05 – 493,150.68 = 986,301.367 MXX tokens.

Assuming Price of ETH remains at 400 USD and Price of MXX remains at US\$0.05.

$$Effective\ Yield_{Annualized} = \left(\frac{\left(\frac{Contract\ Remaining\ MXX\ x\ Price\ of\ MXX}{Asset\ x\ Price\ of\ Asset} \right) \times 100}{Remaining\ Days\ till\ Maturity} \right) \times 365\ days$$

$$Effective\ Yield_{Annualized} = \left(\frac{\left(\frac{986,301.367\ MXX\ x\ 0.05\ USD}{25\ ETH\ x\ 400\ USD} \right) \times 100}{180\ days} \right) \times 365\ days = 1000\% \text{ p. a.}$$

**Underlying protocol formulas are not fixed and might be subject to changes.*

2.7 Governance

MXX tokens will carry voting rights for the governance of the network and will allow the protocol to gradually transit towards being entirely governed by the community.

MXX holders are directly affected by protocol changes in the blockchain, and the governance token will give the community a voice as they can use their voting rights to make decisions on protocol developments. They will be able to present proposals to improve programs and other MXX holders with voting rights may choose to support them.

The number of votes is proportional to their amount of MXX tokens. The move towards a decentralised governance process will protect investor interests, reduce systemic risk and increase long term utility of the protocol.

We believe in (what we call) the **Multiplier Effect**, that decisions made by a large collective is better than decisions made by a single entity.

Any MXX holder can make a proposal. MXX holders can use their MXX tokens to carry voting right for one or more proposals. A minimum of 50% vote nomination is required to pass a proposal.

3. Implementation and System Architecture

3.1 Implementation System Architecture

The MXX protocol will allow users to create their own SSB contracts where they can determine the tenure and interest rate that they want to earn on their underlying asset. The protocol will be publicly available, open-sourced, and free to use.

Functions	Description
<code>createYieldContract(address_erc20Address, uint256_collateral, uint16_tenure)</code>	Allow users to create a contract using his/her ERC20 collateral and specifying a tenure period.
<code>earlyRedeemContract(bytes32_contractId)</code>	Allow users to early-redeem his/her contract.
<code>claimYieldContract(bytes32_contractId)</code>	Allow users to claim his/her matured contract.

acquireYieldContract(bytes32 _contractId)	Allow users to acquire a contract from the Open Market.
updateMFactor(address _erc20Address, uint256 _mFactor)	Allow smart contract owner to update the mint factor for the specified token.
updateMFactorList(address[] memory _erc20AddressList, uint256[] memory _mFactorList)	Allow smart contract owner to update the mint factors for a list of specified tokens.
destroyOMContract(bytes32 _contractId)	Allow smart contract owner to close a contract in the Open Market that is unacquired.
withdrawMXX(uint256 _amount)	Allow smart contract owner to withdraw MXX, in case the community votes to revoke a quantity of MXX supply in the smart contract.
addErc20(address _erc20Address, uint256 _mFactor)	Allow smart contract owner to add a new token to the platform.
addErc20List(address[] memory _erc20AddressList, uint256[] memory _mFactorList)	Allow smart contract owner to add a list of new tokens to the platform.
removeErc20(address _erc20Address)	Allow smart contract owner to remove a token from the platform.
setErc20Validity (address _erc20Address, bool isValid)	Allow smart contract owner to set the token's validity. An invalid token cannot be used to create a new contract. However, all existing contracts can still be used until maturity.
setInterest(uint256 _tenure, uint64 _interestRate)	Allow smart contract owner to set tenure and interest rate.
setParamType (ParamType _parameter, uint256 _value)	Allow smart contract owner to set the parameters such as: <ul style="list-style-type: none"> • Burn fee • Minimum early redeem burn fee • Maximum early redeem burn fee • Total allocated MXX for the platform

3.2 Price Feeds

Typically, a *Price Oracle* is used to retrieve the current exchange rate of each supported asset. However, it is also common that prices are manipulated by malicious actors to exploit the system. In order to avoid such an undesirable situation, MXX protocol will use an internal price factor (mFactor) for each asset instead of relying on a Price Oracle. Each assets' mFactor will be provided and updated on a periodical basis. This mechanism provides a stable pricing and a fair system for all users.

4. Token Economics

Token issuance entity: Multiplier

Token name: Multiplier Token

Token ticker: MXX

Token distribution mechanisms: No pre-mined, No pre-sale, and no ICO. Only through Minting

Total token supply: 9,000,000,000 MXX

Token address: <https://etherscan.io/token/0x8a6f3bf52a26a21531514e23016eeae8ba7e7018>

Team allocation: 30% of total supply. Subject to 3-year vesting period

Team allocation address: 0x48628Aa941722292eCf2169E6DAd958Bc62a93D0

Team allocation vesting details:

2.5% of total supply will be released every 3 months, over a span of 3 years.

5. Roadmap

The proposed roadmap with previous milestones is shown below:

Q4 2020	<ul style="list-style-type: none"> Community governance platform live.
Q4 2020	<ul style="list-style-type: none"> Fully decentralised financial system and open-sourced.
Q3 2020	<ul style="list-style-type: none"> DeFi Beta release. Codes are reviewed by external auditors.
Q3 2020	<ul style="list-style-type: none"> Opens Multiplier platform for MXX token minting. Lists MXX token on major exchange platforms and liquidity providers.
Q2 2020	<ul style="list-style-type: none"> Rebranding and development of Multiplier platform.
Q2 2020	<ul style="list-style-type: none"> Obtains Switzerland Self-Regulatory Organisation (SRO) VQF License Nr 10075 by FINMA.
Q1 2020	<ul style="list-style-type: none"> Rolls out crypto lending platform.
Q4 2019	<ul style="list-style-type: none"> Obtains Hong Kong SAR China NR. 1702/2019 Money Lenders License.

6. Official Wallet Addresses

MXX Token Smart Contract Address: **0x8a6f3bf52a26a21531514e23016eeae8ba7e7018**

Public Holding Wallet Address (Escrow 1 year): **0xF9822C484340f96BCf73835fC2f6a134e8A396f3**

Team Allocation Address : **0x48628Aa941722292eCf2169E6DAd958Bc62a93D0**

Burn Address: **0x19B292c1a84379Aab41564283e7f75bF20e45f91**

7. Disclaimers

Whitepaper

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Eligibility and Regulatory Approvals u

No guarantees are provided for any prospective participants who wish to participate in Multiplier's token issuance, as laws and regulations relating to cryptocurrency are highly restrictive and relatively undeveloped. They are likely to be subject to regular changes and reviews by competent government authorities. Also, such laws and regulations are likely to vary significantly among various jurisdictions and are subject to significant uncertainty.

Therefore, your ability to access marketplaces on which to trade MXX Tokens may be subject to new or changing laws and regulations or interpretations of existing laws and regulations and may adversely impact the liquidity and market price of MXX Tokens. The ability of a holder to access, use, transfer and exchange MXX Tokens may be affected by changes to legislation, regulatory guidance or actions, and judicial decisions. As such, there can be no assurance that any new or continuing regulatory scrutiny or initiatives will not have an adverse impact on the utility or value of MXX Tokens or otherwise impede the Issuer's activities.

Not a Sale of Security Tokens

This whitepaper does not constitute a prospectus or financial service offering document and is not an offer to sell or solicitation of an offer to buy any security, investment products, regulated products or financial instruments in any jurisdiction. MXX tokens are not being structured or sold as securities.

Legal Risks

There is little or no precedent on how existing law might treat the issuance, fungibility, settlement finality, transfer, collateralisation, sequestration, loan, hypothecation, redemption or other disposition of MXX Tokens. There is also little or no precedent on how existing law might treat the rights and obligations between and among the Issuer and the MXX Token purchasers or holders. The occurrence of any related issue or dispute could have a material adverse

effect on the Multiplier Platform or the MXX Tokens. New developments in the law and regulations may also adversely affect the legal or regulatory treatment of the MXX Tokens or the Multiplier Platform and/or the Issuer's businesses.

Market Risks

The market price and the value of cryptocurrencies and digital tokens can be extremely volatile. There can be no assurance that MXX Token holders will be able to receive a return of their capital or any returns or benefits. Purchasers and holders of MXX Tokens should assume the possibility of losing their entire investment or holdings in the MXX Tokens.

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Risk Statements

Purchasing MXX tokens involves substantial risk and may lead to a loss of a substantial or entire amount of the money involved. Prior to purchasing MXX tokens, you should carefully assess and take into account the risks, including those listed in any other documentation. A purchaser should not purchase MXX tokens for speculative or investment purposes. Purchasers should only purchase MXX tokens if they fully understand the nature of the MXX tokens and accept the risks inherent to the MXX tokens.

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