

Samecoin Protocol: A Decentralized, Diversified and Trust Stablecoin Ecosystem

One World, Samecoin

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Abstract

The current stablecoin mechanisms have their inherent shortcomings, which will be discussed in this whitepaper. We will introduce Samecoin Protocol, SAME-stablecoins and the ecosystem of products built around them. With Samecoin Protocol, we aim to bring a new type of mechanism to the stablecoin market, which would maintain the high liquidity of the market and have the lowest possible volatility.

Samecoin Protocol, a decentralized blockchain protocol, is framed to track a basket of stablecoins completely on-chain. It is designed to bring forward the stablecoin system's stability, scalability, and most importantly its decentralization. Thus, we aim to build the Samecoin Protocol as the ideal cornerstone for the blockchain industry.

The governance token, Samecoin, is designed with the idea to upgrade the protocol over time. Different from widely used stablecoins like Tether's USDT, Samecoin Protocol's design has some new features. For example, SAME-stablecoins (e.g. SameUSD) are decentralized and scalable. Their reserve is manually verifiable by anyone at any time. New supply is only possible through minting by the community. A governance module called SameDAO will be added to Samecoin Protocol in future iterations.

www.samecoin.com

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1. Introduction

Either backed by fiat (e.g. USDT, USDC), crypto assets (e.g. DAI), or algorithmically-adjusting supply stablecoins (e.g. Basis), stablecoins are a natural step forward in money. However, the risk with the centralized-issued cryptocurrencies is that they may not be fully collateralized with assets.

Fiat-backed stablecoins like USDT face risks and bottlenecks such as blacklisted bank accounts, compulsory KYC, and even clearing funds. They are not trusted by parts of the crypto community, due to their centralization which goes against the original principles of cryptocurrencies.

Crypto asset-backed stablecoins are vulnerable to the inherent volatility of their underlying assets. A major price drop may end up liquidating more underlying assets than the CDP's worth. With over-collateralization, the disadvantage is that capital efficiency is low because sufficient asset buffers are needed to prevent price fluctuations of collateral.

Algorithmic stablecoins also have obvious shortcomings. For example, they do not have any collateral or liquidity to support the anchor price, which may cause a liquidity crisis and amplify the price volatility when it is lower than its anchor price. Algorithmic stablecoins also have high volatility¹.

To mitigate the above-mentioned risks, we are introducing the Samecoin Protocol and the SAME-stablecoins, which are based on the index of the major stablecoins on the market. By reserving an array of the stablecoins to diversify the risks, users can generate stable cryptocurrency without friction.

There is a lack of easy-to-use crypto products which paired with price volatility has caused cryptocurrencies to fail in becoming widely used by the average person and business owner. Most crypto products currently on the market are hard to use, with the most popular ones being fully centralized, not globally available, and incompatible with the simple use cases of the user.

We are building the Samecoin Ecosystem, an ecosystem of tokens and products aimed at simplifying crypto, making it usable for the everyday user without taking the centralization shortcut that so many have done before.

The Samecoin Ecosystem deeply embeds the use of Samecoin and the SAME-stablecoins into each product, giving them another avenue for wide adoption by the public.

¹ <https://cryptobriefing.com/algorithmic-stablecoin-crashes-50-devs-scramble-fix/>

1.1 Currency Value

Currency has three basic functions: storage of value, medium of transaction, and unit of account. It is a contract between the owner of the property and the market, providing both an agreement and the right to exchange. To date, there have been 5 stages of money in recorded history;

Bartering

This is the very first currency stage. In these early primitive societies, all humans had a similar need for goods, such as food for survival and materials to build tools, shelter, and weaponry. With certain goods more commonly found only in certain areas, a bartering system was used to trade one good for another, with the value of each good determined on its supply and demand.

Gold and Silver

As civilization became better developed and the need of the collective superseded the need of the single individual, exchanging items reached its limits. Daily needs could no longer be met with bartering.

As such, humans started using rare items, such as gold and silver, to exchange goods.

Minted Currency

Feudal societies began emerging, with the common people working the land for landowners. Leaders of these civilizations, such as kings and emperors started manufacturing coins, making them the most accepted form of currency in their demesne.

The centralization of currencies may have started here.

Banknotes

More widely known as paper money, banknotes started appearing after the industrial revolution. In the decades since then, society entered a highly civilized state. Trade of goods and currency started becoming more globalised. A good can be cultivated in Africa, shipped to Asia for processing and manufacturing, and then finally sold in markets in Europe.

Digital Money

Human civilization has been in this stage for over a decade. Society runs almost entirely without cash, with cross-border transactions happening with just a tap on the phone. Currency becoming virtual means that we have officially entered the stage of docking between a virtual and real society.

In 2008, Satoshi Nakamoto, the anonymous inventor of Bitcoin, was developing a "peer-to-peer" electronic system that could be traded in for cash to avoid double-spending.² His invention was successful, creating a decentralized payment system. Satoshi Nakamoto successfully completed the work that many groups and individuals failed to complete in the 1980s. However, price fluctuation is one of the biggest obstacles preventing Bitcoin from becoming a daily currency application. Because of this, we believe that price stability is the steppingstone to the widespread use of cryptocurrencies.

1.2 Stablecoin

Designed to solve the volatility and stability problems of traditional cryptocurrencies, the stablecoin is a new type of cryptocurrency that is secured by the value of pegging assets. The high volatility of decentralized cryptocurrencies prevents their widespread adoption. To solve this problem, a stablecoin can provide a stable exchange means, acting as a value of digital storage in an overly volatile market environment.

The underlying assets is one of the most important aspects of stablecoin design, which is often a part of the stablecoin's symbol. Because it is seen as a stable store of value around the world, USD is a popular choice. In fact, individuals around the world, especially those in emerging and developing economies, often store their savings in USD rather than their local, domestic currency. Another benefit of using USD is that price comparison becomes easy. You can easily regard the stablecoin price of a project as the USD price of this project. Other than USD, fiat currencies like the Euro, Chinese Yuan and Japanese Yen are also popular for different countries' communities.

Off-Chain, asset-backed Stablecoin:	Stablecoins whose price is pegged to fiat currencies. The most common peg is to the US Dollar. Examples of this type of stablecoin are USDT from Tether ³ , USDCoin from Circle and Coinbase ⁴ , TrueUSD from TrustToken ⁵ and GUSD from Gemini ⁶ .
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² <https://bitcoin.org/bitcoin.pdf>

³ <https://tether.to/>

⁴ <https://www.coinbase.com/usdc>

⁵ <https://www.trueusd.com/>

⁶ <https://www.gemini.com/dollar>

On-Chain, asset-backed Stablecoin:	Stablecoins backed and issued by cryptocurrencies' price and the stability of it. An example is Dai from MakerDAO ⁷ .
Seigniorage-Style (Algorithmic):	Stablecoins which use a series of algorithms to keep the price stable. ⁸ Continual network growth is necessary and funds to stop the trend when the currency values fall.

Stablecoins have the chance to rebuild the financial system. Using blockchain, which is an unlimited, easy-to-use infrastructure, stablecoins may quickly occupy the global market and replace existing payment systems. Stablecoins challenge our view of money, creating a paradoxical situation where they may be used as a currency without being labeled as one. It remains to be seen whether stablecoins will coexist, complement, or take over existing payment methods.

Compared to the three existing types of stablecoins, Samecoin Protocol combines their respective advantages and proposes a more promising solution.

1.3 Solution - Samecoin Protocol and SAME-stablecoins

Samecoin Protocol is choosing to peg SAME-stablecoins to a bundle of stablecoins. This has the benefit of insulating the stablecoin against shocks potentially arising from events affecting a particular country, currency, or commodity.

Stablecoins are cryptocurrencies or tokens that have added economic structure, aiming to stabilize price, and purchasing power. Stablecoins work to bootstrap price stability into cryptocurrencies as a stopgap prior to mass adoption. Current projects are either custodial (relying on custodians to hold reserve assets off-chain) or non-custodial. Non-custodial stablecoins strive to retain the property of reduced counterparty and censorship risk. Non-custodial stablecoins transfer this risk from stablecoin holders to speculators, who hold leveraged, collateralized positions in cryptocurrency.

Samecoin Protocol plans to peg the price of SAME-stablecoins to a basket of widely available stablecoins.

⁷ <https://makerdao.com/en/>

⁸ https://fintechnews.ch/blockchain_bitcoin/130-stablecoin-projects-are-in-development/29206/

The first of the SAME-stablecoins is SameUSD (SUSD), a token that is pegged to a basket of US Dollar-backed stablecoins which will initially include USDT, BUSD and USDC. These 3 stablecoins were selected due to their popularity in the market, which results in wide availability across several exchanges and decentralised exchanges.

This is highly important as SameUSD can be minted by the public itself, by depositing stablecoins which are supported in the basket of stablecoins. If SameUSD's circulating supply is to grow and its adoption accelerate, the public should have an easy way to mint additional SameUSD.

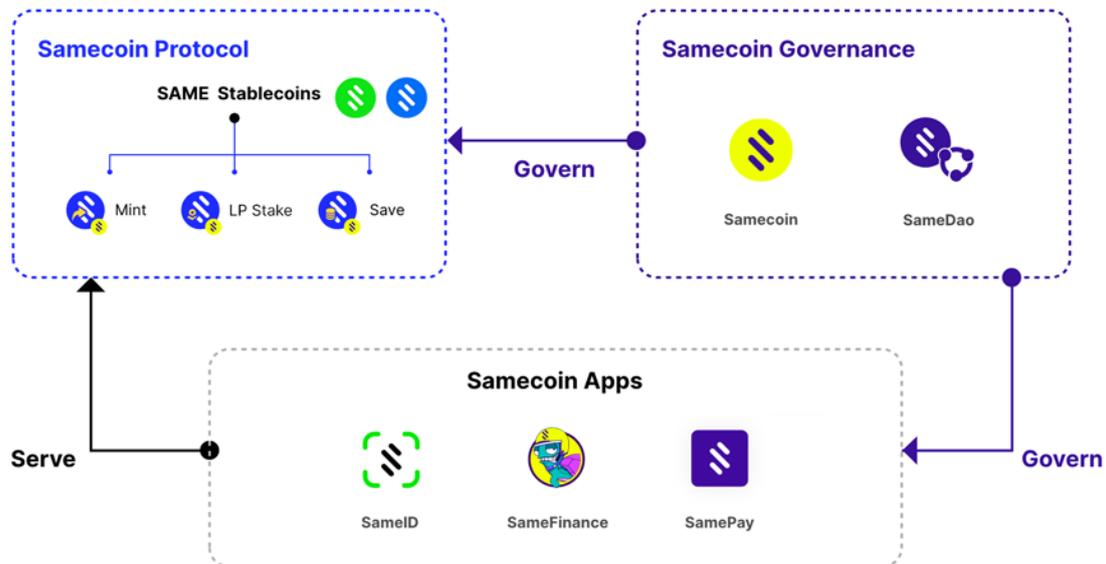
For a single type of stablecoin, pegging to a fiat currency with finite supply can eventually lead to problems of scale and management of risk, especially policy risk. However, pegging to a variety of stablecoins can circumvent this problem and create a more stable value.

SameUSD is further explained in section 2.1.2 of this whitepaper.

2. Samecoin Ecosystem Design

As seen below, the Samecoin Ecosystem has three major components: Samecoin Protocol (the core), Samecoin Governance (DAO), and Samecoin Apps (the applications).⁹

Samecoin Ecosystem



2.1 Samecoin Protocol

Samecoin Protocol is a set of decentralized and open smart contracts. It provides the functionalities necessary to mint and save the tokens described in this whitepaper. Samecoin Protocol consists of the following components;

- Samecoin (SAME): Utility and governance token of the Samecoin Ecosystem. It is further introduced in section 2.1.1 of this whitepaper.
- SameUSD (SUSD): First of the SAME-stablecoins, backed by a basket of widely available stablecoins. It is further introduced in section 2.1.2 of this whitepaper.
- Mint Smart Contract: Provides the function of minting additional SUSD by depositing USDT, BUSD or USDC. It is further explained in section 3.1 of this whitepaper.
- Save Smart Contract: Provides the function of saving SUSD and receive SAME as a reward. It is further explained in section 3.2 of this whitepaper.

⁹ Where applicable, the offering of any of these products and services are subject to, where necessary in each relevant jurisdiction, the obtaining of each requisite licence and/or approval from each relevant government body or authority, or the partnering of Samurise Foundation Ltd with entities that have such requisite licences and/or approvals under each relevant jurisdiction for such entities to conduct the relevant regulated activities.

- LP Stake Smart Contract: Provides the function to deposit a pair of two tokens (like SAME-SUSD), which are added to a liquidity pool. Users would then receive reward in SAME tokens as long as they're staking. It is further explained in section 3.3 of this whitepaper.

2.1.1 Samecoin (SAME)

Samecoin (SAME) is the utility and governance token of the Samecoin Ecosystem. It is available on multiple blockchains, including:

- As a BEP-20 token on BSC (Binance Smart Chain)
- As an ORC-20 token on HSC (Hoo Smart Chain)
- As an HRC-20 token on HECO (Huobi Eco Chain)

SAME will have uses in all the Samecoin Apps and is rewarded by the Samecoin Protocol upon the minting and saving of SUSD. The selling of SAME tokens in private and public sales will be used as a method of fundraising. All private and public sales of SAME should be on the BSC blockchain, where the BEP-20 of SAME would be issued. Additional details on token distribution and use of funds raised in private and public sales can be found in section 4 of this whitepaper.

When SameDAO is deployed, SAME holders may also use SAME to participate in governance.

2.1.2 SameUSD (SUSD)

SameUSD (SUSD) is the first of the SAME-stablecoins. It is available on multiple blockchains, including:

- As a BEP-20 token on BSC (Binance Smart Chain)
- As an ORC-20 token on HSC (Hoo Smart Chain)
- As an HRC-20 token on HECO (Huobi Eco Chain)

It will also be made available on more blockchains as the Samecoin Protocol also gets deployed on additional blockchains. Such announcements will be made on Samecoin's official communication channels.

Its value is pegged to a basket of US Dollar-backed stablecoins; USDT, BUSD and USDC. This means that the total supply of SUSD will always be equal to the amount of USDT, BUSD and USDC (and any other stablecoins which may be supported in the future) that are stored in the basket of stablecoins.

e.g. If the basket of stablecoins contains 100 USDT, 200 BUSD and 50 USDC, the total supply of SUSD can only ever be 350 SUSD.

The minting of SameUSD is further explained later in the following sections as well as section 3.1 of this whitepaper.

Different from other Defi projects currently on the market, Samecoin will focus on helping companies not involved in the DLT sector to carry out digital finance reforms. As a result, the advantages of decentralization can be integrated into the aforementioned companies, giving them possibilities to create more societal value and provide improved user experiences.

2.2 Samecoin Governance

Samecoin plans to add a Decentralized Autonomous Organization (DAO) module. As the governance token, SAME can be used to vote for stakeholders' concerned proposals. Known as the SameDAO, this governance mechanism can not only earn the SAME token, but also optimize and govern the Samecoin Protocol module.

Samecoin Governance has control over the following parts of **Samecoin Protocol**:

1. Adjusting the parameters of Mint and Save smart contract functionalities
2. Adjusting of redemption and minting fees
3. Adjusting mechanisms that reward SAME tokens such as the ones on Mint, Save and LP Stake smart contracts
4. Managing the reserve assets of SAME-stablecoins like SUSD

Additional controls may also be attributed to the Samecoin Governance as the Samecoin Protocol further develops through the initiative of the members of the Samecoin community. These changes shall be announced on Samecoin's official communication channels.

The functions of Samecoin Governance will be accessible on a Dapp (Decentralized Application) that will be accessible to everyone.

In order to be eligible to vote, users will need to go to the Samecoin Governance Dapp and stake SAME tokens. They'll receive vSAME tokens, which are used to represent their voting weight. When staking SAME, users will also receive additional SAME tokens as a reward. The allocation for governance-related SAME rewards is further detailed in section 4.1 and 4.1.2 of this whitepaper.

While vSAME is presented like a token, it can only be used on the Samecoin Governance Dapp and cannot be transferred between users.

SAME holders will be able to discuss governance topics or raise suggestions in the Samecoin discord and forum. Both channels will be opened by the time that Samecoin Governance is released.

Holders of vSAME are able to vote for proposals directly on Snapshot using their vSAME. For any changes/proposals to be implemented, they first need to be passed through this voting system.

The ultimate decision on implementing passed proposals is left to the Samecoin team, in order to protect against changes that may negatively affect Samecoin Protocol.

Samecoin Governance is planned for release in 2022.

2.3 Samecoin Apps

Except for the modules which are also found in other DeFi projects, we are designing and building a set of applications that support SAME and SAME-stablecoins, helping to grow their adoption through widely available apps. This will not only promote the Samecoin Ecosystem's stability, but also close the usability gap between DeFi and its users.

We design all products to have a simple and straightforward user experience in mind. This makes user onboarding easier, enlarging the target audience of each product and not make it limited to users who are already experienced with using cryptocurrencies and DeFi applications.

In the case of B2B products such as SameID, we focus on ease of integration, providing support in the form of account managers and development support.

2.3.1 SameID

SameID is a user account system built using decentralized identity technology, allowing authentication for account logins and actions to happen on the blockchain, independent of a centralised authority. Every login done with a SameID account is verified on the blockchain, adding an extra security layer and improving security for the user. Every payment transaction done by wallet tied to a SameID is also verified on the blockchain, giving transactions an additional security layer as well.

Any first-party product within the Samecoin ecosystem will have plans to support user logins through a SameID. This means that users of SamePay may use their SameID to login to their wallet and add an extra layer of authentication when launching the app or to confirm a transaction. SameID will also be available for third-parties to integrate into their own products, further growing the Samecoin ecosystem.

By enabling logins with SameID, businesses can eliminate long registration forms and the need to host user account systems, optimising their product for conversion and reducing their liability.

SameID is planned for release in 2023.

2.3.2 SamePay

Our first mobile application, SamePay, is a non-custodial, crypto wallet app with a social payments system. It aims to bring crypto into every person's and business owner's pocket, by being easy to use and available worldwide.

For a crypto payment system to flourish and be adopted by users, the payment process should be as simple as it is on fiat payment systems. Making a transaction should be as simple as sending a text message, and it should solve the volatility issue that held back cryptocurrencies from being adopted as a form of currency for payments. To facilitate the sending of payments, SamePay has introduced an encryption scheme that we call address-based encryption.

SamePay incorporates an address-based encryption protocol that allows senders to directly use phone numbers, email addresses or usernames (such as SameID username) as public keys. Also, it uses a reserve-backed protocol to minimize volatility through flexible supply rules. In short, the combination of these two features provides a seamless experience of using cryptocurrency as a means of payment.

SamePay will be available for download for iOS¹⁰ and Android¹¹ smartphones. SamePay also aims to provide business services, such as white label, to help traditional companies to start their own crypto-payment business. As a result, SamePay would encourage more traditional companies to embrace the crypto field and accelerate their own businesses.

SamePay's mission is to simplify crypto and put it into every person's and business owner's pocket, without taking the centralization shortcut that so many have done before.

SamePay's full release is planned for early 2022, with beta testing starting earlier, in Q4 of 2021.

2.3.3 SameFinance

SameFinance is a leveraged yield farming protocol that offers users various options of deposit pools, staking and yield farming. Compared to similar products like Alpaca Finance¹², Alpha Finance¹³ and Rabbit Finance¹⁴, SameFinance primarily promotes stablecoin deposit pools, rather than more volatile assets like BTC, ETH and BNB. More volatile assets will also be supported for users who are more experienced in using DeFi

¹⁰ <https://www.apple.com/ios>

¹¹ <https://www.android.com/>

¹² <https://www.alpacafinance.org/>

¹³ <https://alphafinance.io/>

¹⁴ <https://www.rabbitfinance.io/>

products. We wish to provide novice users with less risky options, which together with an intuitive user experience makes SameFinance more welcoming to novice DeFi users.

Due to their less volatile nature, stablecoins provide lower risks in yield farming. In comparison, volatile assets like BTC, ETH and BNB require constant monitoring as volatile markets increase the risks of liquidation.

SameFinance links borrowers and lenders through smart contract mechanisms and features. Users can deposit crypto assets into various pools, whose funds are then made available for other users to borrow to open leveraged yield farming positions.

As the deposit pools get higher utilisation (% of the deposit pool's funds that are currently being borrowed), the depositors gain interest. The higher the utilisation, the higher the interest rate is.

Our long-term plan is to make SameFinance available on multiple networks/blockchains, further increasing the available pool of users. It will first be released on the HECO chain (Huobi Eco Chain), with release on more blockchains later in 2021 and 2022. These will be announced on Samecoin's official communication channels.

More information is available on SameFinance page at <https://samecoin.com/samefinance> where documentation can also be accessed. You can also find information on the risks that come with the functions available on SameFinance and information on how to use the product.

SameFinance consists of the following functions;

2.3.4.1 Deposit Pools and ibTokens

Users can deposit tokens into deposit pools (collection of tokens locked in a smart contract), which are then made available for other users to borrow through leveraged yield farming. This kind of user can also be referred to as a "Depositor", "Lender" or "Liquidity Provider".

When depositing, the depositor gets ibTokens (interest-bearing tokens) equivalent to the value in Tokens that they deposited. For example, depositing USDT will issue ibUSDT to the depositor. Depositing SAME would issue ibSAME.

It's important to note that ibTokens received through SameFinance can only be used on SameFinance. They do not currently have uses on any other Samecoin application such as SamePay, SameID or Samecoin Governance.

As yield farmers borrow funds from the deposit pool (so the deposit pool gets more utilisation), the exchange rate between the Token and ibToken would shift more in favour of ibToken, making the value of the ibToken higher than the value of the Tokens that the depositor originally deposited into the deposit pool.

e.g. Depositor deposits 100 USDT into the USDT deposit pool, issuing them with 100 ibUSDT. At the launch of SameFinance, the exchange rate of ibUSDT-USDT is 1:1 but ibUSDT's value will grow over time as the USDT in deposit pools gets higher utilisation. Let's say the value of ibUSDT has increased to 1.20 USDT, the depositor can now redeem their 100 ibUSDT for 120 USDT (100 USDT principal + 20 USDT interest).

On SameFinance, depositors can also stake their ibTokens, earning them SAME rewards at every block. While ibTokens are staked, they continue to accrue interest for their owner.

It's important to note that Compound Protocol's¹⁵ cTokens have been used as the inspiration for the way we've implemented ibTokens.

2.3.4.2 Leveraged Yield Farming

Yield farming (sometimes also referred to as liquidity mining) is the action of staking tokens and earn interest on them as a form of passive income. When yield farming, the user is providing liquidity to the DeFi platform, which in turn makes the deposited tokens available for other users to borrow.

Yield Farming is mostly commonly done by depositing tokens as a trading pair, such as USDT/SAME, at a value ratio of 1:1. While the tokens are staked, the user receives income in the form of additional tokens. On SameFinance, users also receive rewards for staking in the form of SAME tokens.

Yield Farming becomes "Leveraged Yield Farming" when the user borrows additional tokens to complete or enlarge the size of his yield farming position, increase his potential interest. This also comes with higher risks of liquidation.

e.g. A user (further referred to as "Farmer") wants to open a Yield Farming position on the HUSD/USDT trading pair. Since he only has USDT, the Farmer decides to open a Leveraged Yield Farming position, borrowing HUSD from the HUSD deposit pool. By swapping assets by the correct ratio (swap/exchange stablecoins via depth.fi with a minimum transaction fee), Same Finance provides liquidity to the pool and stakes LP for MDEX rewards.

¹⁵ <https://compound.finance/>

3. Samecoin Protocol - The Core Algorithm

In this part, we discuss the design of Samecoin Protocol and its smart contracts, by diving into the existing stablecoins' various components and their design elements. We explore their strengths and drawbacks and identify the implementation and architecture of these core functions.

The functions of the Mint and Save smart contracts can be accessed by users on <https://app.samecoin.com>, where users can connect with their own crypto wallet using Metamask or Trust Wallet. Support for additional wallet extensions will also be added.

This Samecoin Dapp (decentralised app) provides users with an intuitive user interface where they can use the functions mentioned in this section.

Before connecting, users also have an option to select which blockchain (sometimes also referred to as “network”) to connect with. The available options are BSC, HECO and HSC. Depending which option is used, the user would be interacting with and using the Samecoin Protocol smart contracts and cryptocurrencies that are deployed on that blockchain.

e.g Bob goes to the Samecoin Dapp on app.samecoin.com and selects BSC in the menu found on the user interface. He clicks on the connect button which triggers Metamask to ask him if he wishes to connect. If Bob doesn't have BSC network setup on his Metamask, he will be prompted by Metamask if he wished to add it and switch network. He approves this action. Any action that Bob does on the Samecoin Dapp will now be with the Samecoin Protocol contracts deployed on BSC and the BEP-20 versions of SAME and SUSU.

All these financial facilities ¹⁶ are established, ensuring the stability of the stablecoin system and the sustainability of Samecoin token economics. It is also important to note that all functions mentioned in this section are done through smart contracts that can be accessed by the public. Users may only use their own wallet, which Samecoin does not have any control over. Users need to approve any interactions with the Mint and Save smart contracts through prompts provided by their wallet of choice (such as Metamask). These smart contracts will be regularly audited by reputable third parties. Samecoin Protocol's smart contracts have been audited by CertiK¹⁷.

¹⁶ Where applicable, the offering of any of these products and services are subject to, where necessary in each relevant jurisdiction, the obtaining of each requisite licence and/or approval from each relevant government body or authority, or the partnering of Samurise Foundation Ltd with entities that have such requisite licences and/or approvals under each relevant jurisdiction for such entities to conduct the relevant regulated activities.

¹⁷ <https://www.certik.org/projects/samecoin>

3.1 Mint Smart Contract

The Mint smart contract provides the function of creating (more commonly referred to as “minting”) additional SUSD by depositing USDT, BUSD or USDC. This mints SUSD equal to the amount/number of the deposited stablecoins and sends it directly to the user’s wallet.

The smart contract also rewards users with a little bit of SAME every time they mint SUSD, based on the amount of SUSD minted. This reward mechanism is used to incentivise minting and growing the circulating supply of SameUSD. The deposited USDT, USDC and BUSD is managed by the Mint smart contract, forming the basket of stablecoins (the “reserve”) that backs the value of all the SameUSD in circulation.

The minting process works as follows:

- Step 1: User chooses a stablecoin (from the supported stablecoins that form the basket of stablecoins) & enters the amount that they wish to deposit.
- Step 2: Smart Contract will calculate and show in real time how much SUSD they will get as well as the amount of SAME they’ll receive as a reward.
- Step 3: User confirms & approves the transaction on their wallet.
- Step 4: The deposited stablecoins (USDT, USDC or BUSD) are received by the smart contract and are added to the basket of stablecoins in the reserve.
- Step 5: Mint Smart Contract mints and sends the SUSD to the user’s wallet
- Step 6: User also receives SAME reward according to how much SUSD they’ve minted.

Users can also redeem SUSD to get back an equivalent/converted amount of USDT, USDC or BUSD. This function can also be accessed from <https://app.samecoin.com>.

The redeem process works as follows:

- Step 1: User chooses a stablecoin (from the supported stablecoins that form the basket of stablecoins) & enters the amount of SUSD that they wish to redeem.
- Step 2: Smart Contract will calculate and show in real time how much of their selected stablecoin they will get back.
- Step 3: User confirms & approves the transaction on their wallet.
- Step 4: The selected amount of stablecoins are withdrawn from the smart contract and sent to the user’s wallet. The size of the basket of stablecoins has now decreased by that same amount.
- Step 5: The user’s selected amount of SUSD is sent to the Mint Smart Contract and burned. SUSD’s total supply has now decreased by that same amount.

SAME is pre-minted and stored in the Mint smart contract which then sends it to users as minting rewards. SAME distribution is further explained in section 4 of this whitepaper.

SAME rewards for minting will be distributed according to the user's Mint amount percentage.

e.g In total 900 SUSD have been minted. The user decides to mint 100 SUSD by depositing 100 USDT. This brings the total to 1000 SUSD minted, and the current minting rewards are 10 SAME per 10 mins. As a minting reward, the user will receive 1 SAME per 10 mins since $(100/1000) * 10 = 1$ SAME per 10 mins.

Users' Mint Rewards per block = $(m/M) * R_m$

m: This user's net Mint SameUSD amount of a period

M: The total net mint SameUSD amounts of a period

R_m: Mint rewards of a period

PS: One period = 10 min.

The conversion rate of a stablecoin to a SAME-stablecoin is rigidly fixed at a 1:1 ratio. USDT, USDC and stablecoin issued by Tier 1 exchanges such as BUSD will be adopted as the benchmark.

3.2 Save Smart Contract

The Save Smart Contract provides the function of saving/staking (or locking in smart contract) SUSD in order to receive interest income in the form of SAME tokens.

When users choose to save SUSD, the Save smart contract automatically deposits the backed stablecoins to the market tested and audited DeFi application Venus Protocol¹⁸ on Binance Smart Chain to earn income. All funds are held safely on Save Smart Contract which is audited by Certik¹⁹.

SAME is pre-minted and stored on the Save smart contract which then sends it to users as saving rewards. SAME distribution is further explained in section 4 of this whitepaper. Save rewards are distributed according to the user's Save TVL (Total Value Locked) percentage.

e.g In total there is 1000 SUSD being saved and locked in the Save Smart Contract. The user has saved 200 SUSD out of the 1000 SUSD total, and the current saving rewards are set at 0.3 SAME per block. This means that this user will receive 0.06 SAME rewards at every block since $(200/1000) * 0.3 = 0.06$ SAME.

User's Save rewards per block = $[s/S] * R_s$

¹⁸ <https://www.venus.io/>

¹⁹ <https://www.certik.org/projects/samecoin>

s: This user's SameUSD saving TVL per block

S: The last user's SameUSD saving TVL per block

Rs: Savings rewards per block

3.3 LP Stake Smart Contract

The LP Stake smart contract provides the function of depositing a pair of tokens (such as the SAME/SUSD trading pair) into a liquidity pool and in return receive SAME as interest.

When doing this, the user is depositing both SAME and SUSD tokens at a 1:1 ratio based on their market value. So, if the value of SAME is \$2.50, the user would deposit 100 SUSD and 250 SAME. Liquidity providing is a very common function in DeFi, enabling users to become liquidity providers in exchange for additional tokens as passive income.

When these tokens are deposited into a liquidity pool (LP), a new token is generated, representing the share of the pool that's owned by the user. This is what's called a liquidity provider (LP) token. The owner of the LP tokens can use them for several functions within their native platform as well as third-party DeFi apps. Offering an LP Staking product has the positive effect of making more liquidity available in the DeFi product.

Samecoin Protocol's LP Stake smart contract will first be available on HSC (Hoo Smart Chain), with release on BSC planned at a later date which will be communicated by Samecoin's official communication channels.

In the HSC version of Samecoin Protocol, we use PuddingSwap²⁰ to create LP Tokens.

In the BSC version of Samecoin Protocol, we plan on using PancakeSwap²¹ to create LP Tokens.

These LP Tokens are then staked into the LP Stake pool of the DeFi platform (PuddingSwap in the case of HSC) to start gaining SAME rewards to the user.

LP Stake rewards will be distributed according to the user's Stake TVL(Total Value Locked) percentage.

e.g In total there are 1000 SUSD in value staked. The user has staked 200 SUSD out of the 1000 SUSD total, and the current LP Stake rewards are set at 0.6 SAME per block. This means that this user will receive 0.06 SAME rewards at every block since $(200/1000) * 0.3 = 0.06$ SAME.

User's LP Stake Rewards per block = $[Is/LS] * RIs$

²⁰ <https://puddingswap.finance/>

²¹ <https://pancakeswap.finance/>

ls: This user's LP Token staking TVL per block

LS: The last user's LP Token staking TVL per block

Rls: LP Stake rewards per block

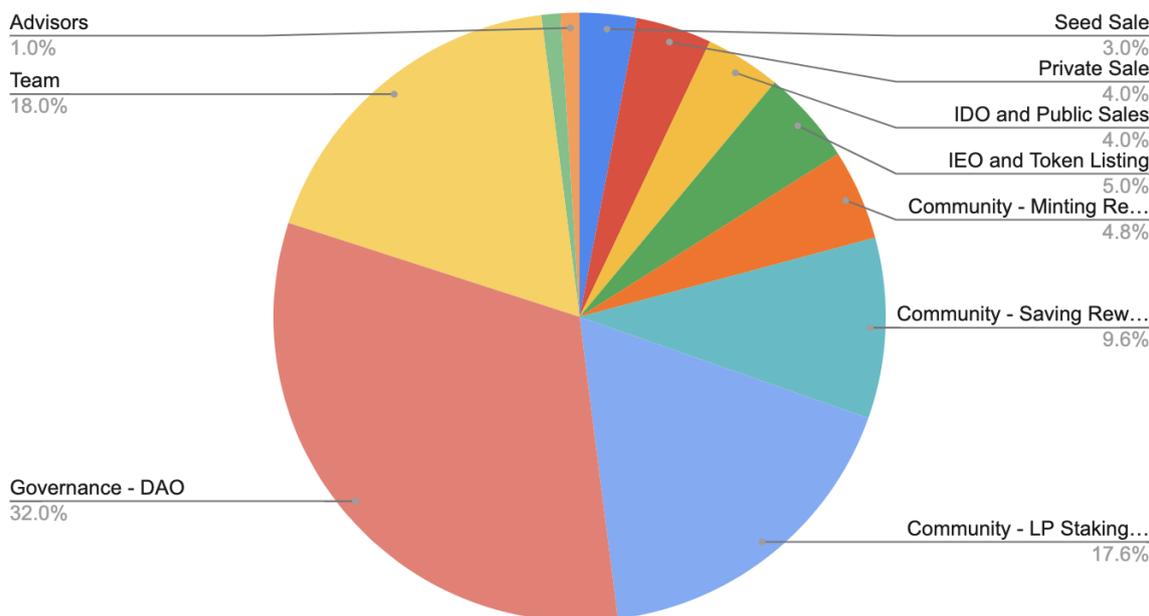
4. Tokenomics

4.1 Token Distribution

Like many other tokens, the total supply of SAME tokens is limited. This means that there will only ever be 100 million SAME. Since SAME will also be available across multiple blockchains, it's important to note the total supply of 100 Million is shared between all blockchains. Token distribution is as follows:

Type	Samecoin %	Samecoin #
Seed Sale	3%	3,000,000
Private Sale	4%	4,000,000
IDO and Public Sales	4%	4,000,000
IEO and Token Listing	5%	5,000,000
Community - Minting Rewards	4.8%	4,800,000
Community - Saving Rewards	9.6%	9,600,000
Community - LP Staking Rewards	17.6%	17,600,000
Governance - DAO	32%	32,000,000
Team	18%	18,000,000
Marketing Activities	1%	1,000,000
Advisors	1%	1,000,000

Distribution of Samecoin



Funds collected through SAME token sales in Seed Sale, Private Sale, and IDO and Public Sales (totalling 11% of token allocation) are used as follows:

- Marketing - 30%
- Development - 30%
- Operations - 30%
- Partnerships - 6%
- Legal - 4%

4.1.1 Community Rewards (Liquidity Providing)

Since it is a project with DeFi fundamentals, 32% of SAME distribution will be rewarded to users who contribute to growth and adoption, through rewards when using the Samecoin Protocol’s functions like Minting, Saving and LP Staking. All these rewards will be released in a release cycle of 4 years. As the project progresses, the release cycle of community rewards may be changed, either through changes made by the team or as proposals are made and voted on through Samecoin Governance. Any changes made would be publicly announced on the Samecoin official communication channels.

Type	Percentage %	Amount	1st Year (34%)	2nd Year (28%)	3rd Year (22%)	4th Year (16%)
Mint	4.8%	4,800,000	1,920,000	1,440,000	960,000	480,000

Save	9.6%	9,600,000	3,840,000	2,880,000	1,920,000	960,000
LP Stake	17.6%	17,600,000	7,040,000	5,280,000	3,520,000	1,760,000

Reward release cycle is as follows:

- 1st Year - 34%
 - Mint 31 SAME per 10 min
 - Save 0.31 SAME per block(3s)
 - Stake 0.57 SAME per block(3s)
- 2nd Year - 28%
 - Mint 26 SAME per 10 min
 - Save 0.26 SAME per block(3s)
 - Stake 0.47 SAME per block(3s)
- 3rd Year - 22%
 - Mint 20 SAME per 10 min
 - Save 0.20 SAME per block(3s)
 - Stake 0.37 SAME per block(3s)
- 4th Year - 16%
 - Mint 15 SAME per 10 min
 - Save 0.15 SAME per block(3s)
 - Stake 0.27 SAME per block(3s)

The reward formulas for Minting, Saving and LP Staking are outlined in sections 3.1, 3.2 and 3.3, respectively, of this whitepaper.

4.1.2 Governance - DAO

DAO rewards help to incentivise the community to govern the Samecoin Protocol. Thus, we plan to leave a 32% share to motivate the community to participate in governance. The share will help in ensuring that the Samecoin Protocol has a long-term incentive in being governed by the community.

4.1.3 Seed Fund and Private Sale

The speed of innovation in cryptocurrencies gets faster with each passing day. The best way to avoid a cold start is by using a seed round (3%) to speed up the early progress of the project.

A private sale will also be conducted for 4% of the distribution. Seed sales, private sales and public sales will only issue BEP-20 SAME tokens on the Binance Smart Chain (BSC).

4.1.4 IDO and Public Sales

IDO and Public Sales will benefit DeFi users who are willing to participate in the Samecoin Protocol and its functionalities on the Dapp via their own crypto wallets. Thus, we plan to leave 4% share for these users.

Seed sales, private sales and public sales will only issue BEP-20 SAME tokens on the Binance Smart Chain (BSC).

4.1.5 IEO and Token Listing

IEO and token listing on centralized exchanges is planned to help token adoption in user demographics who may not know how to take part in DeFi or are unwilling to participate in the DeFi applications. IEO is also important to drive forward adoption of Samecoin and market products for additional growth. Thus, we plan to leave 5% share for this allocation.

4.1.6 Team

To support the development tasks of the team and third-party developer communities, so that we can promote the building of more Samecoin projects, we reserve 18% of the allocation. This ensures the project development tasks can proceed smoothly. This will also provide incentives to ensure the long-term passion and fighting spirit of the team.

4.1.7 Marketing Activities

1% of token allocation will be used for marketing activities, including several marketing campaigns to grow the community and increase exposure of the project.

4.1.8 Advisors

Finally, 1% of token allocation goes to reward consultants and advisors who have been part of the project, advising and assisting the team.

4.2 Release Plan

Drawing on the successful cases of BTC, the deflationary model will motivate users to participate in the ecosystem by using the products and developing their own. After all, as time goes by, there will be fewer SAME in the circulation, and more SAME will be consumed by the system. Due to this, the released amount in the first year will be the highest, and then it will decrease every year until all token allocation has been released. The release rate will be adjusted once a year, reaching its lowest by year 4. With the launch of the Governance smart contract, we will also provide future release plans to the community and followers of the project.

4.3 Blockchain

SAME and SUSD are deployed on BSC, HSC and HECO initially, taking advantage of their low fees, ease of development and compatibility. The overall size of these combined blockchains will also help towards the adoption of SAME and SAME-stablecoins like SUSD.

The Samecoin smart contracts will be also deployed on additional blockchains, to have a reach into more communities and achieve maximum adoption. Where possible, we'll also explore options for connecting Samecoin with DeFi platforms found on these blockchains.

We also look forward to possibilities to deploy on Ethereum²² and Polygon²³. More blockchains may be announced at later dates on Samecoin's official communication channels.

The total supply of SAME shall always be 100 Million in total, with the Samecoin team actively promotion solutions for cross-chain adoption and bridging.

²² <https://ethereum.org/en/>

²³ <https://polygon.technology/>

5. Samecoin Roadmap

The initial roadmap is the following:

2021 Q2	2021 Q3	2021 Q4
<p>Samecoin Protocol</p> <ul style="list-style-type: none"> • Initial release • Mint smart contract • Save smart contract 	<p>Samecoin Protocol</p> <ul style="list-style-type: none"> • LP Stake smart contract <p>SameFinance</p> <ul style="list-style-type: none"> • Deposit Pools and ibTokens • Staking • Leveraged Yield Farming 	<p>Samecoin Protocol</p> <ul style="list-style-type: none"> • Additional Chains and inter-connectivity with SameFinance <p>SameFinance</p> <ul style="list-style-type: none"> • Support for additional chains and new functionalities <p>Samecoin Governance</p> <ul style="list-style-type: none"> • Internal private testing
2022 Q1	2022 Q2	2022 Q3
<p>SameFinance</p> <ul style="list-style-type: none"> • Support for more trading pair options for Leveraged Yield Farming and Deposit Pools 	<p>SamePay</p> <ul style="list-style-type: none"> • Initial Release 	<p>Samecoin Governance</p> <ul style="list-style-type: none"> • Voting • Discussion channels

6. Conclusion

Stablecoins are a new concept when it comes to money. However, one must understand how and why stablecoins are becoming more widely accepted and innovated, while noting the problems which still exist in them today. Stablecoins were developed initially to democratize the issuing of private currencies. Stablecoins are already striving to become the fiat currency substitute that is needed for both CEX and DEX. Stablecoins, like USDT, have already proved that they can be the solution for the trading parts so as to minimize the dependency on traditional fiat currency.

Unfortunately, an imperfect stablecoin system may make us vulnerable to illusory innovation, and eventually overestimate the importance of re-designed payment systems and ignore the new payment system that is undergoing profound changes.

In this whitepaper we've described the Samecoin Protocol, a collection of smart contracts that allow the Minting, Redeeming, Saving, LP Staking of SameUSD (SUSD) and the rewarding of Samecoin (SAME) tokens. We've outlined their functions, their availability and distribution. We've described our plans for Samecoin Governance. With the release of SameDAO, we plan on giving the community the ability to propose and vote on changes to Samecoin Protocol.

Finally, we also described Samecoin Apps, a collection of applications that includes SamePay, SameFinance and SameID. We believe that the user experience that they provide can drive forward the adoption of SAME and SAME-stablecoins to experienced and novice crypto users alike.

We hope that this Samecoin Ecosystem may become a milestone of current and future DeFi prosperity.

For more information, visit [Samecoin.com](https://samecoin.com).