

# DaoCoin - An Open Infrastructure for Issuance of Stable Coin

DaoCoin

## Abstract

*DaoCoin is an open issuance infrastructure for fiat-collateralized cryptocurrency. DaoCoin infrastructure includes;*

*a) global network of fund management nodes consisting of multiple third-party trust companies and banks;*

*b) a networked KYC/AML framework supported by global regulators;*

*c) live APIs for real-time token and fund information disclosure;*

*d) a set of streamlined, customizable ecommerce-style widgets for coin issuance and redemption;*

*e) a Layered Smart Contract mechanism (LSC) supporting multiple stable coin contracts with programmed interface for third-party auditing. With this open infrastructure, any qualified organizations or individuals can issue their own brand of stable coin.*

## 1. Background

Stable coin is a special type of crypto-asset that maintains a stable value against the target price of fiats (e.g. USD) or assets (e.g. gold).

Why do we need stable coin?

Crypto-assets like Bitcoin and Ethereum are, by all means, disruptive and game-changing, they have served well as a store of value. However, Bitcoin and Ethereum have failed to meet a key function of traditional currency - exchangeability. In addition, the volatility of these coins can pose a huge problem for users. Indeed, one of the issues driving merchants away from Bitcoin is volatile price coupled with rising transaction fees.

Although most stable coin projects aim to create a new form of “money” in the crypto world, crypto currency is still vastly underutilized. Currently, the biggest users are traders who use crypto currency to preserve capital during bear markets. The majority of stable coins are serving one single purpose to hedge against volatility. Simply put, stable coins are used by traders, rather than everyday consumers, and they are not being used as money is intended to be used in the traditional sense.

This begs the question, how can we make stable coin attractive to speculators while encouraging a wider consumer base to use stable coin in a practical sense? DaoCoin firmly believes that the challenge lies in involving real-world organizations, (who are playing key roles in fiat circulation) to channel stable coin liquidity into real-life scenarios. DaoCoin’s answer to this problem is to build a fundamental infrastructure for issuance of stable coin, and to open it to actors such as merchants, retail businesses, international commodity traders, financial institutions and so on. Using DaoCoin

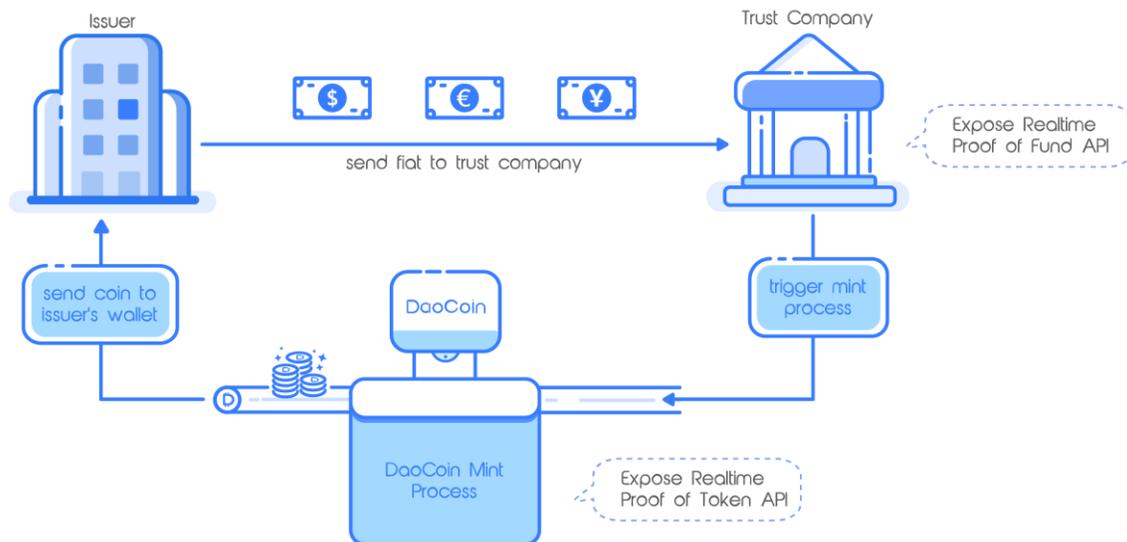
infrastructure, these independent actors could issue their own brands of stable coin, and circulate it within and beyond their ecosystems.

There are three different approaches used to generate stable coins; A) centralized issuance with asset collateralization, B) decentralized issuance with asset collateralization and C) decentralized issuance with no asset collateralization. Various efforts have been made to examine the strengths and weaknesses of each approach. Approach A is efficient with a responsible issuer to manage sales, compliance, redemption and market value. Approach A is normally claimed to be 100% backed by fiat. However, existing stable coins within this category are often criticized for lack of transparency. Approach B collateralizes crypto assets on-chain to maintain total transparency. Due to the volatile nature of crypto-assets, Approach B requires over-collateralization which is inefficient financially speaking. Moreover, a decentralized approach is inevitably sacrificing efficiency in other aspects such as sales, compliance checks, redemption process and market value maintenance for transparency. Approach C inherits all merits of a decentralized issuance model, although critics often question whether it stores any value at all since it is not backed by any existing assets or future potential income.

DaoCoin itself follows approach A (centralized issuance with asset collateralization, with significant improvements in terms of transparency.) DaoCoin has identified the key factors of a successful stable coin as **TRANSPARENCY**, **EFFICIENCY** and **SECURITY**.

## 2. TRANSPARENCY: Third-party Trust Network for Fund Management

The centralized-issuance approach remains a controversial one. A key reason being lack of transparency. Some stable coin issuers allegedly print money without legitimate reserves. DaoCoin tackles this issue by introducing third-party trust companies (and banks to back them) into the tokenization and redemption process.



DaoCoin and the issuers using DaoCoin infrastructure will not touch funds at any point during the life cycle of a stable coin. All funds are held by third-party trust companies. The above diagram depicts a typical fiat-to-token process (a.k.a. mint process). DaoCoin interacts with trust companies via API to trigger generation of a stable coin.

DaoCoin does not rely on a single trust company, but on a school of networked trust companies worldwide. Instant remittance methods like ACH and SCT are primarily used for fund transfers. If a client's bank does not offer instant remittance services, DaoCoin will assign a SWIFT bank account to the client, so that funds can be processed efficiently.

### **3. TRANSPARENCY: Live Proof of Funds and Tokens via API**

DaoCoin has inbuilt mechanisms to ensure live information disclosure of token amounts and bank balances. Through the public APIs published by DaoCoin, anyone can acquire information and demonstrate bank balance/token amounts for a specific stable coin issued using DaoCoin infrastructure, without consent of the issuer.

The APIs are available on DaoCoin website <http://daocoin.money>

### **4. EFFICIENCY: Network of KYC/AML Screening for Regulation Compliance**

To improve the efficiency of legal clearance and meet compliance regulations for various countries, DaoCoin has established a network of KYC/AML checkpoints. Per customer region, DaoCoin can auto-switch between nodes for the most efficient choice, allowing it to be constantly up-to-date and not reliant on a centralized system.

The KYC/AML screening network consists of multiple KYC databases and AML analyzing services. Per client region, DaoCoin will auto-assign the most efficient KYC node and meet the privacy regulation of that region. For AML monitoring, DaoCoin, in collaboration with worldwide AML partners, constructed insightful patterns to identify suspicious behaviors.

Issuers using DaoCoin infrastructure are enabled with KYC/AML capability through widgets offered by DaoCoin.

### **5. EFFICIENCY: Widgets for Stable Coin Issuance and Redemption**

Issuers using DaoCoin infrastructure are mostly businesses with no experience in developing blockchain-driven projects. Therefore, DaoCoin offers a set of streamlined, customizable ecommerce-style widgets for issuance and redemption of tokens. The widgets can be embedded into third-party webpages or apps in minutes.

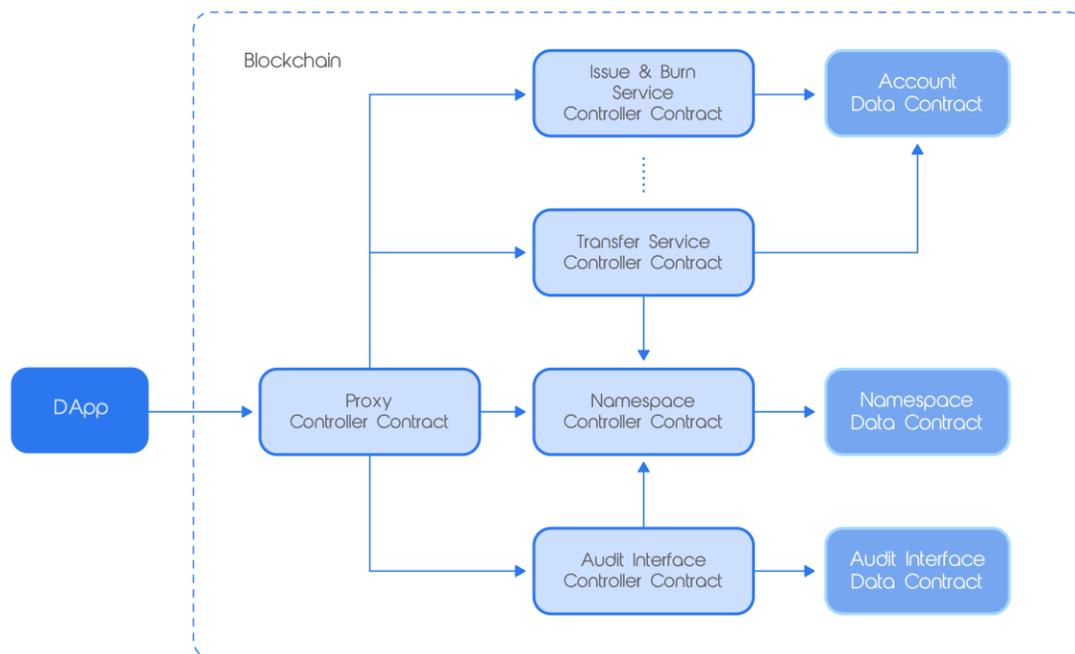
DaoCoin is also developing software and hardware for retail businesses. In collaboration with related issuers, customers can easily buy and sell stable coins at a physical store front and pay for commodities.

## 6. SECURITY: Layered Smart Contract Mechanism

A well designed smart contract mechanism is crucial for smart coin issuance. DaoCoin's smart contract mechanism aims at an even higher standard, as it supports multiple stable coins at once. DaoCoin uses an innovative mechanism- Layered Smart Contract (LSC). LSC is designed to modularize function units of smart contracts and group them into layered structures to facilitate separation of the Controller Layer (a stack of stack of controller contracts) and Data Layer (a stack of data contracts). By doing so, third-party issuers and DaoCoin can execute business logic updates and smart contract updates in a quarantined environment.

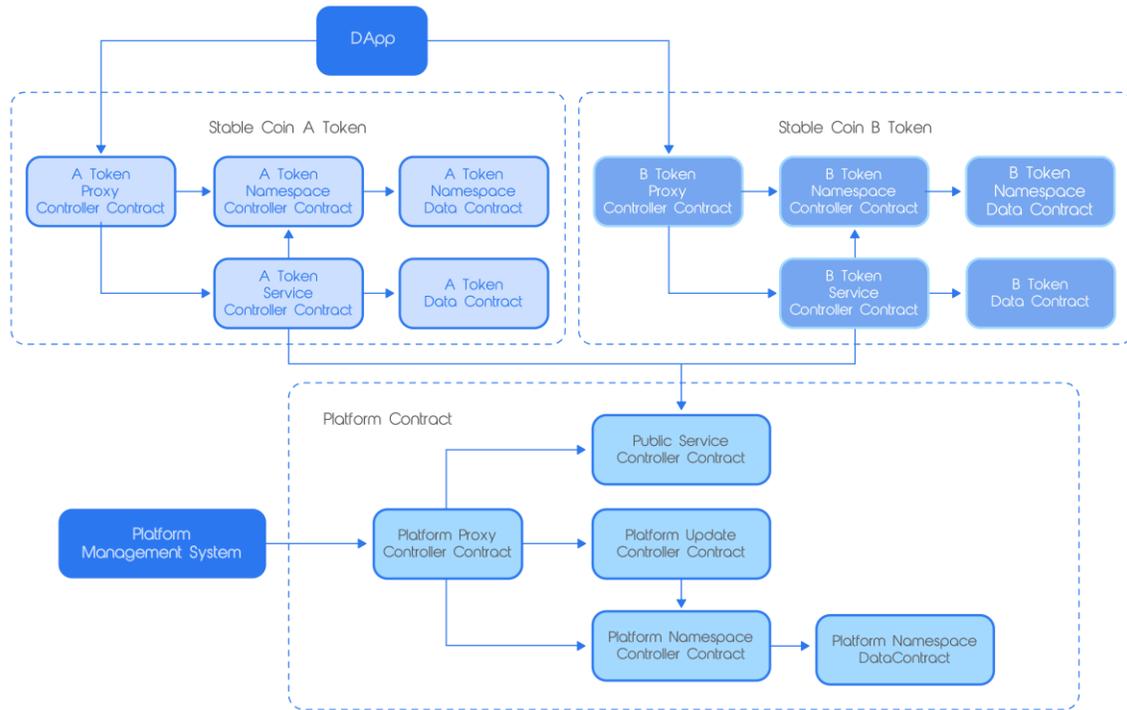
Within Controller Layers, the multiple smart contracts are used to interface DApp and to execute business logic.

- **Proxy Controller Contract:** Proxy Controller Contract is built on top of all other Controller Contracts, it is the single entry point for DApp. Regardless of how other Controller Contracts execute updates or rollbacks, it is programmatically transparent for the DApp.
- **Account Service Controller Contract:** This contract is designed to execute transaction related activities such as issuance, transfer, escrow, suspend and burn.
- **Audit Interface Controller Contract:** This contract embedded interface is for third-party audit firms to retrieve data.



As for Data Layers, they are dedicated for data schema definition and data IO interface, data layers are only exposed to the Controller Layer.

DaoCoin supports multiple LSCs running in parallel. All common LSC contracts are simplified into a Public Service Controller Contract. The platform management system initializes a new stable coin by referencing the Public Service Controller Contract.



## 7. DCP as Governance Token

DaoCoin issued its own ERC-20 governance token, DaoCoin Power (DCP). Holders of DCP exercise voting rights and are entitled to discounts on fees. The total supply of DCP is 10 billion and will not increase.



## References

1. Stably. (2018, September 4). *Transparent Reserve-Backed Stablecoins For Multiple Blockchain Protocols*. Retrieved from <https://s3.ca-central-1.amazonaws.com/stably-public-documents/whitepapers/Stably+Whitepaper+v7.3.pdf>
2. Myles Snider (2018, January 17). *AN OVERVIEW OF STABLECOINS*. Retrieved from <https://multicoin.capital/2018/01/17/an-overview-of-stablecoins/>
3. Basis. (2017, July 20). *A Price-Stable Cryptocurrency with an Algorithmic Central Bank*. Retrieved from [https://www.basis.io/basis\\_whitepaper\\_en.pdf](https://www.basis.io/basis_whitepaper_en.pdf)