

USDD

Over-Collateralized Decentralized Stablecoin Protocol

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Abstract

Diversified use cases can increase a currency's value and transaction scale. In addition to the stable price and purchasing power, the scale effect is key to the widespread acceptance and long-term adoption of fiat money as a medium of exchange. USDD is a cryptocurrency issued by the TRON DAO Reserve with a stable price and diverse use cases. The guaranteed over-collateralization using various mainstream cryptocurrencies helps ensure the stability and security of USDD and consolidates its value as a true settlement currency. In addition, a decentralized currency protocol with a stable price will expand use cases for cryptocurrency in general, making it truly accessible with far-reaching implications for both the blockchain space and the real economy.

1 Introduction

Bitcoin is one of the earliest cryptocurrencies, but it is not yet widely accepted as a settlement currency in daily life. The primary cause of this is its high price volatility, which results in losses for at least one party involved in a transaction, especially in transactions that take a long time to complete. This uncertainty has made using Bitcoin costly and impossible in practice. Bitcoin creates strong market demand, which in turn generates sharp movements in its price; therefore, its scale of supply and use cases are limited. Yet, it is the transaction scale and use cases that determine the value of a currency.

USDD resolves short-term price fluctuations and cyclical price risks with its responsive monetary policy and mintage mechanism. The following content will explain the USDD protocol in detail and how it stabilizes the price and grows the transaction scale.

2 Currency Peg

The USDD protocol is committed to meeting the needs of consumers for stable digital currency by enabling USDD to be used for electronic payments. To achieve this, the USDD protocol will be pegged to the USD - the most widely applied fiat currency in the world - to establish a stable, decentralized, and tamper-proof USDD-USD system. The protocol will uncover the nature of currencies and bridge the gap between digital assets and their practical applications.

3 Over-Collateralization

The security of a stablecoin protocol depends on whether there is sufficient asset value behind it. On the basis of the TRX burning mechanism implemented by the USDD protocol, the TRON DAO Reserve has also introduced high-liquidity digital assets such as BTC, USDT, and TRX for over-collateralization in the protocol. The total value of collateralized assets will consistently remain significantly higher than the total value of USDD in circulation, with the current minimum collateral ratio set at 120%. The responsive monetary policy mechanisms will allow the ratio to dynamically adjust to maintain stability based on fluctuating reserve asset values and market conditions. Additionally, all collateral assets are stored in public on-chain accounts and listed on the TRON DAO Reserve's website for full transparency.

4 TRON DAO Reserve

After four long years of development, the TRON blockchain has become the largest stablecoin network in the world. The overall scale of stablecoins and financial assets on the chain exceeds 55 billion US dollars, and the accumulated settlement is 4 trillion US dollars. The TRON network is willing to come to lead the

establishment of the TRON DAO Reserve to take the first step in the development of a decentralized central bank in the industry.

The main purpose of the establishment of the TRON DAO Reserve is to protect the blockchain industry and market, alleviate extreme and long-term downturns, and solve the panic problem caused by the financial crisis. The main function is to regulate the risk-free interest rate of stablecoins in TRON and other blockchain networks, regulate the market by releasing and tightening liquidity, protect the exchange rate stability of the centralized and decentralized stablecoins in TRON and other blockchain networks; formulate and implement monetary policy, exchange rate policy, assume the responsibility of the lender of last resort; keep and issue financial reserve assets from TRON, other blockchain networks and financial institutions, maintain the entire blockchain industry financial market stability and control the systemic risks of blockchain finance.

At the beginning of its establishment, the TRON DAO Reserve will preserve and host the USD 10 billion of high-liquidity assets raised by blockchain industry promoters as an early reserve, and all reserves will enter the TRON DAO Reserve in the next 6-12 months. In the future, it will continue to absorb more liquid assets as financial reserves, and better play the role of a decentralized central bank. The TRON DAO Reserve will also attract more whitelisted institutions as shareholders to better fulfill the responsibilities of the central bank. TRON DAO Reserve will also act as the initial custodian to maintain the USDD authority management of TRON's decentralized stablecoin, and guarantee it with reserve financial assets to ensure the stable exchange rate of USDD and the decentralization of USDD.

The development of TRON USDD will fully entrust TRON DAO Reserve with mainstream institutions in the industry to conduct issuance and reserve management in an open and transparent manner. At the beginning of its establishment, TRON DAO Reserve will save and host the USD10 billion of high-liquidity assets raised by blockchain industry initiators used as early reserves to maintain the exchange rate stability and rigid payment of TRON USDD. At the beginning of the establishment of the TRON DAO Reserve, the basic risk-free interest rate of USDD was set at 30%, and the USDD was coordinated to receive USDD. The relevant decentralized and centralized bodies implement the rate.

5 Achieving Price Stability

The stability of USDD is maintained by the TRON DAO Reserve's adoption of a series of monetary policies based on market conditions, relying on the TRON DAO Reserve assets. Like all central banks in the world, the TRON DAO Reserve will adopt a series of monetary policies to maintain USDD price stability.

5.1 Setting Interest Rate

Interest rates use the price mechanism to adjust the supply and demand of money and loans and are one of the main monetary policy tools of central banks around the world. The TRON DAO Reserve will also set the USDD interest rate with cooperative institutions/agreements and has the right to adjust the interest rate at any time according to market conditions.

5.2 Open Market Operations

Central banks around the world openly buy or sell bonds in the secondary markets. In essence, the central banks are trading base money for bonds: they deposit base money through purchases and withdraw it through sales, thereby adjusting the supply and demand of the base money and stabilizing its value.

The TRON DAO Reserve adopts a mechanism that functions similarly to OMO. Through buying or selling USDD and reserve assets, including TRX, BTC, USDT, and USDC on CEXs or DEXs, it manages to keep USDD's price stable. The TDR will announce each of its OMO publicly to the market to positively guide the market perception.

The core purpose of the open market operation of the TRON DAO Reserve has been and will always be to maintain USDD's price stability rather than profit from trading. The proceeds generated from OMO, if any, will go to the reserves for efforts to stabilize USDD's price and further the growth of TRON's ecosystem.

5.3 Window Guidance

In times of severe market turbulence, the TDR will partner with institutions such as JustLend and CEXs to limit the amount of USDD and TRX lent or even temporarily pause the lending of USDD and TRX to crack down on malicious short-sellers.

6 Issuance of USDD

The TRON DAO Reserve and its shareholder whitelist institutions were the first miners of USDD. This chapter will describe the USDD issuance process and management mechanism in detail. At the same time, this chapter will refer to the TRON DAO Reserve as TRON for short.

6.1 Initializing

The USDD token was issued on April 30th, the TRON DAO Reserve will pre-issue 999 billion TRC-10 USDD and transfer 1 billion of them to an authorized, multi-signature contract as the early USDD reserves. The remaining 998 billion USDD will be transferred and staked in an issuance contract, a smart

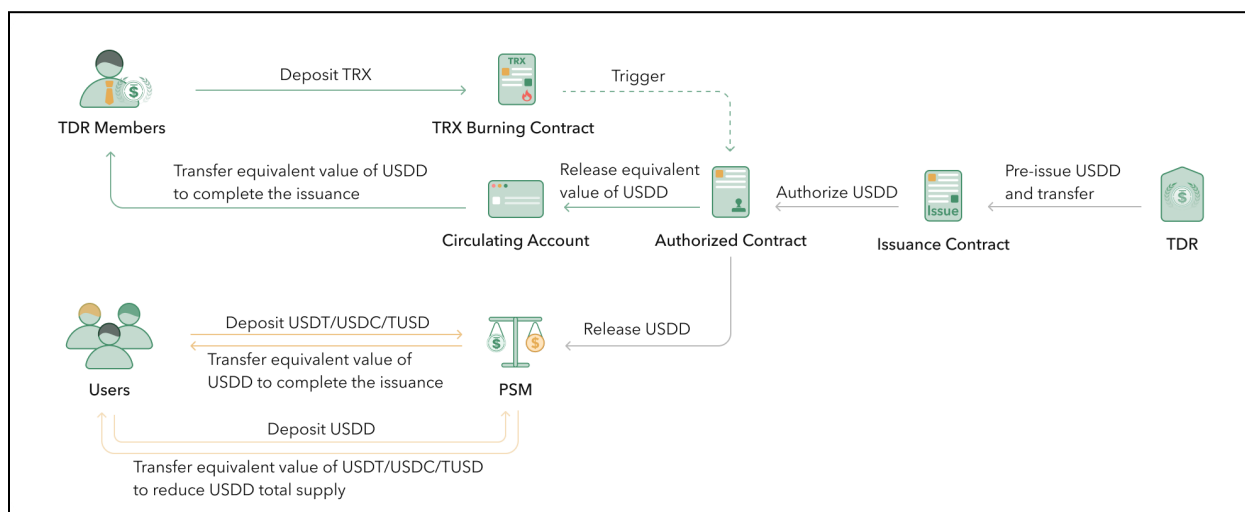
contract based on the decentralized TRON network with a 5/7 decentralized institution-controlled 10-day time-lock. In cases of the USDD reserved in the authorized contract being lower than 500 million, the TRON DAO Reserve will authorize part of the USDD tokens from the issuance contract via 5/7 multi-signature to replenish the reserves.

6.2 Issuance

The USDD issuance process is the process of converting the TRC-10 USDD version in the authorization contract into the TRC-20 USDD version and releasing it to users. There are two ways to issue USDD:

- TDR and members stake TRX to issue USDD
- PSM mechanism

The detailed issuance process is shown in the figure below. The upper part of the figure is to mint and issue USDD through TDR and institutional members through staked TRX, and the lower part of the figure is to issue USDD through PSM. Both methods must release USDD through the authorization contract.



As of August 16, 2022, TDR and institutional members have issued a total of about 725 Million USDD through this mechanism. At present, these USDDs have been circulated in multiple mainstream blockchains and multiple mainstream markets. The detailed process of minting and issuance is as follows:

1. TDR and institutional members transfer TRX to the TRX destruction contract *.
2. Calculate the equivalent USD according to the current exchange rate, and transfer the equivalent TRC-10 USDD from the authorization contract * to the circulation account in a multi-signature manner.

3. After converting the TRC-10 USDD in the circulation account into TRC-20 USDD, transfer it to the institutional members to complete the USDD issuance

As a USDD fixed exchange rate currency exchange module, PSM allows users to exchange other stablecoins to USDD at a fixed exchange rate of 1:1 through this function. Currently, USDT/USDC/TUSD is supported. Similarly, users are also allowed to exchange USDD for other stablecoins at a fixed exchange rate of 1:1. The process is as follows:

1. TDR releases the authorized unissued TRC-10 USDD in the authorization contract to PSM's safeVault contract.
2. When PSM performs USDT/USDC/TUSD to USDD conversion, it will convert TRC-10 USDD in safeVault to TRC-20 USDD and release it to users. In reverse conversion, TRC-20 USDD will be converted to TRC-10 USDD and transferred to the safeVault contract;

6.3 Replenish the Reserve

When the USDD reserve in the authorized account is insufficient, the TDR can release the specified amount of USDD from the issuing contract to the authorized account after obtaining at least 5/7 signature authorization, but this part of the authorized USDD can just be extracted to the authorization contract after 10 days.

6.4 Contract and USDD Token Address

Below are the associated contracts,

TRX Burning Contract	TNMcQVGPzqH9ZfMCSY4PNrukevtDgp24dK
Issuance Contract	TRFGnuUqED3NDpMYgqZY1X3gAeVHNw1SDq
Authorized Contract	TTsASxQhMk4t3S5vZMVVJ7nR2GQjDXNRnq

Below are USDD addresses on the different blockchains currently available,

TRON	TRC-10 USDD	1004777
	TRC-20 USDD	TPYmHEhy5n8TCEfYGqW2rPxsgHsfzghPDn
BNB Chain	BEP-20 USDD	0xd17479997f34dd9156deef8f95a52d81d265be9c
Ethereum	ERC-20 USDD	0x0C10bF8FcB7Bf5412187A595ab97a3609160b5c6
BitTorrent Chain (BTTC)	USDD_t	0x17f235fd5974318e4e2a5e37919a209f7c37a6d1
	USDD_e	0xb602f26bf29b83e4e1595244000e0111a9d39f62
	USDD_b	0x74e7cef747db9c8752874321ba8b26119ef70c9e

PSM involved address,

VAT *	TBbYhvifBJVQ5ytThJ5ZfHfX8mK133ccqv
USDDJoin *	TUhQDzXJ3QsT6F2KiK5gZ3H673TV1516E9
GemJoin *	TMn5WeW8a8KH9o8rBQuX4RCgckD2SuMZmS
USDT PSM *	TM9gWuCdFGNMiT1qTq1bgw4tNhJbsESfjA
USDT Quota *	TEVuAK3cXeG93wJLE2Hv4U2sx69hFovnjU
USDC GemJoin *	TRGTuMiDYAbztetdndYyMzYvtaRmucjz5q
USDC PSM *	TUcj1rpMgJCcFZULyq7uLbkmfh9xMnYTmA
USDC Quota *	TQnAGXspTiqJVvdNqUk8giSBFW4Ykt2Gxm
TUSD GemJoin *	TPxcmB9dQC3LHswCNEc4rJs1HFGB8MeYjT
TUSD PSM *	TY2op6AKcEkFhv8hxNJ3FBUfjManxYLSe
TUSD Quota *	TSApGmpYaPqKrQahjzbs7yrMjobSfugpXT
safeVault	TMgSSHn8APyUVViqXxtveqFEB7mBBEGqNP

* This contract is controlled and managed by a multi-signature of 5/7 institutional members.

7 Conclusion

The USDD protocol is a decentralized stablecoin protocol secured by the over-collateralization of multiple mainstream digital assets, which complements existing fiat currencies and cryptocurrencies as means of transaction and store of value. We introduced the issuance process and management mechanism of the protocol in the USDD, the TRON DAO Reserve, and prominent blockchain institutions in the industry will conduct the issuance and management of USDD, which are completely based on the TRON decentralized network and adopt multi-signature methods to ensure transparency and security of issuance and management.

USDD has immense potential for adoption and applications. We will continue to focus on business use cases in the field of cryptocurrency. We will soon see increasing users adopting USDD as an online medium of payment, which greatly reduces transaction fees. As the world becomes more decentralized, we will see USDD being integrated with more dApps thanks to its solid tokenomics. The USDD protocol will empower people to further pursue the next stage of global financial accessibility, collectively leveraging blockchain technology on the masses. With perpetual existence and zero dependence on any centralized entity, USDD will become the most decentralized stable currency in human history.

If you want to support the USDD protocol, please contact us at contact@usdd.io.

