Decentralized Stable Monetary System

Whitepaper

V0.05

UnionDAO foundation

https://uniondao.com

Preface

UnionDAO Network is a transparent and sustainable financial system, providing stable currency system, mortgage loan and decentralized governance mechanism. UnionDAO is an open source network agreement jointly created by the world's top economists and blockchain technology geeks in order to practice Hayek's ideal of " de-nationalization currency ", based on blockchain technology. Intelligent contract deployment on the chain will run permanently and cannot be terminated. It is an intelligent resource that can be freely used by all mankind. UnionDAO has absorbed the research results of many blockchain projects, which is an innovation on the shoulders of giants, especially thanks to the contributions of Bitcoin, Ethereum, Makerdao and Libra development teams.

UnionDAO's mission is to build a simple, borderless currency and financial infrastructure that serves billions of people. This white paper Outlines our plans to work towards a low volatility cryptocurrency and smart contract platform to create new opportunities for responsible financial services innovation.

Problem statement

The birth of the Internet and mobile broadband has given billions of people around the world access to knowledge and information, high-fidelity communications, and a wide range of cheaper and convenient services. These services are now available in almost every corner of the world on a $40 smartphone. This connectivity facilitates economic empowerment by allowing more people to access the financial ecosystem. Together, tech companies and financial institutions have also developed solutions that help empower the global economy. Despite these advances, many people around the world remain on the sidelines. Of the 1.7 billion adults still had no access to the financial services of traditional Banks, 1 billion have mobile phones and nearly 500 million have Internet access.

For many, aspects of the financial system resemble the telecommunications networks of the pre-internet era. Twenty years ago, the average price of a text message in Europe was 16 euro cents. Now, anyone with a basic data plan can communicate worldwide for free on a smartphone. Communications services were expensive, but the prices were uniform; Today, people in desperate need of financial services often have inadequate or limited access to financial services because of cost, reliability and the flow of remittances. Across the globe, the poor pay more for financial services. Their hard-earned income is used to pay for miscellaneous fees such as remittance fees, wire transfer fees, overdraft fees and ATM fees. Payday loans can carry an annualized interest rate of 400 percent or more, and a $30 financial-services fee for borrowing just $100. When asked why they remain on the fringes of the current financial system, those who remain "unbanked" tend to point out that there is not enough capital, that fees are expensive and unpredictable, that Banks are too far apart and that the necessary paperwork is lacking.

Blockchain and cryptocurrencies have many unique attributes that have the potential to address the availability and credibility of financial services. These attributes include distributed management to ensure that the network is not controlled by a single entity; Open access, allowing anyone with an Internet connection to participate; And secure encryption technology to protect the security of funds.

However, the existing blockchain system has not been widely adopted. The lack of scalability of existing blockchains and the volatility of cryptocurrencies have, so far, led to poor performance of existing cryptocurrencies in preserving value and mediums of exchange, thus hindering their widespread use in the market. In addition, some projects seek to undermine existing systems and circumvent regulations, rather than innovate in compliance and regulation to improve the effectiveness of anti-money laundering initiatives. We believe that collaboration and innovation with the financial sector, including regulators and experts across industries, is the only way to ensure a sustainable, safe and credible framework to support this new system. This approach can make a huge leap forward towards a global financial system that is cheaper, more accessible and more connected.

Opportunities

As we embark on this journey together, we feel it is necessary to share our beliefs with the community in order to understand the ecosystem we plan to build around this initiative:

- We believe more people should have access to financial services and cheap capital.
- We believe that everyone has an inherent right to control the fruits of his lawful labor.
- We believe that open, immediate and low-cost global currency flows will create enormous economic opportunities and commercial value for the world.
- We firmly believe that people will increasingly trust decentralized management.
- We believe that the global monetary and financial infrastructure should be designed and managed as a public good.
- We believe that everyone has a responsibility to help promote financial inclusion, support users who follow online ethics, and continue to maintain the integrity of this ecosystem.

System overview

Hot digital assets such as Bitcoin and Ethereum are too volatile to be used as everyday currencies. Bitcoin's value often fluctuates wildly, changing as much as 25 percent in a single day and sometimes growing more than 300 percent in a month.
UNDT(Union Network Dollar Token) is a digital currency backed with stable currency assets (such as USDT, DAI, USDC, PAX, TUSD, LIBRA, UNDTx) as collateral, whose price versus the Dollar remain stable. We believe that stable digital currency assets like UNDT are essential to fully realize the potential of blockchain technology. UNDT also features high liquidity, stability and decentralized distribution. UNDT is the first cryptocurrency under UnionDAO flag that has price stability characteristics and anchors USD value. It will appear in more forms in the future to support anchoring currency value of more countries.
UNDTx is another stable currency backed by mortgage assets whose prices and dollars remain stable. UNDTx is one of UNDT's most important collateral stable currency assets.
Union is an intelligent contract platform on Ethereum. Support and stabilize UNDT prices through stable asset backed debt (SACDP) and mortgage insurance pools. UNDTx prices are supported and stabilized through CDP, automated feedback mechanisms, and appropriate external incentives.
Union platform allows anyone to have the opportunity to use a stable currency asset (such as DAI, USDT, TUSD USDC, PAX, UNDTx, etc.) to generated UNDT. When UNDT is created, it can be used as any other digital currency asset: freely distributed to others, as a means of payment for goods and services, or for long-term storage. Importantly, UNDT is also a necessity De-Fi (decentralized finance). The Union platform gives anyone the opportunity to leverage on Ethereum's assets to generate UNDTx. When UNDTx is created, it can be used as any other digital currency asset. The Union platform creates three assets: UDAO for governance, UNDTx for mortgage creation, and UNDT for circulation.

UNDT mortgage smart contracts

Anyone can mortgage a third-party Stable currency asset on the Union platform to generate UNDT and generate UNDT through the Union's intelligent contracts-stable Assets Collateralized Debt Positions (SACDP).
SACDP holds the mortgage assets stored by the user and allows the user to generate UNDT, but generating UNDT means generating a debt. This debt locks up the collateral in the SACDP until the customer pays UNDT. Valid SACDP's are 100% secured, which means the value of the collateral equals the value of the debt. And provide additional solvency through mortgage insurance pools.

Mortgage debt warehouse use process

Step 1: create the SACDP and store the collateral and generate the UNDT

The user sends a transaction and details the type and amount of collateral assets stored in the SACDP used to generate UNDT. At this point, SACDP is mortgaged. SACDP generates an equal amount of UNDT, and SACDP generates an equal amount of debt, which locks in collateral until the outstanding debt is paid off.

Step 2: debt repayment and stabilization costs.

When the user wishes to redeem the mortgaged asset, they need to pay the debt in the SACDP and the stable cost of this debt. The stabilization fee can only be paid by UDAO, which will be destroyed in 100% proportion upon receipt by the platform. When the user pays the UNDT and UDAO to the SACDP, the SACDP debt is paid off and the user gets all the collateral back.

UNDT mortgage insurance pool smart contract

Mortgage insurance pool to accept insurance funds, insurance risks in the occurrence of compensation.

Mortgage insurance pool use process

Step 1: accept the insurance funds

A portion of the stable digital assets that users pay for when they subscribe to UDAO are used to insure their mortgage debt warehouses and store insurance funds in smart contracts.

Step 2: insurance payouts

In the event of an insurance risk, including but not limited to the undervaluation, freezing, or elimination of the secured assets, the smart contract pays out against the existing assets of the insurance pool.

UNDTx mortgage smart contracts

Anyone can leverage UNDTx on the Union platform by using the Collateralized Debt Positions (CDP) of the Union's intelligent contracts-collateralized Debt Positions.

The CDP holds the mortgage assets stored by the user and allows the user to generate UNDTx, but generating UNDTx means generating a debt. This debt locks up the collateral in the CDP until the user pays UNDTx. All valid CDP's are over-collateralized, meaning the value of the collateral is higher than the value of the debt.

Mortgage debt warehouse use process

Step 1: create the CDP and store the collateral

The user first sends a transaction to Union to create a CDP, and then sends another transaction to detail the type and amount of collateral assets stored in the CDP used to generate UNDTx. At this point, CDP is mortgaged.

Step 2: generate UNDTx from CDP

The CDP holder sends a transaction and specifies the amount of UNDTx to be generated from the CDP, and the CDP generates an equal amount of debt, which locks in collateral until the outstanding debt is paid off.

Step 3: debt repayment and stabilization costs

When a user wishes to redeem a mortgage, they need to pay off the debt in the CDP and the stable cost of that debt. The stabilization fee can only be paid by UDAO. When the user pays UNDTx and UDAO to CDP, the debt in the CDP is paid off.

Step 4: take back the mortgage and close the CDP

When the debt and stabilization costs are repaid, the CDP holder can send a transaction to the Union and get all the collateral back.

UNDT token contract

UNDT has expanded on the ERC20 standard to support the DeFi boom. Main realization:

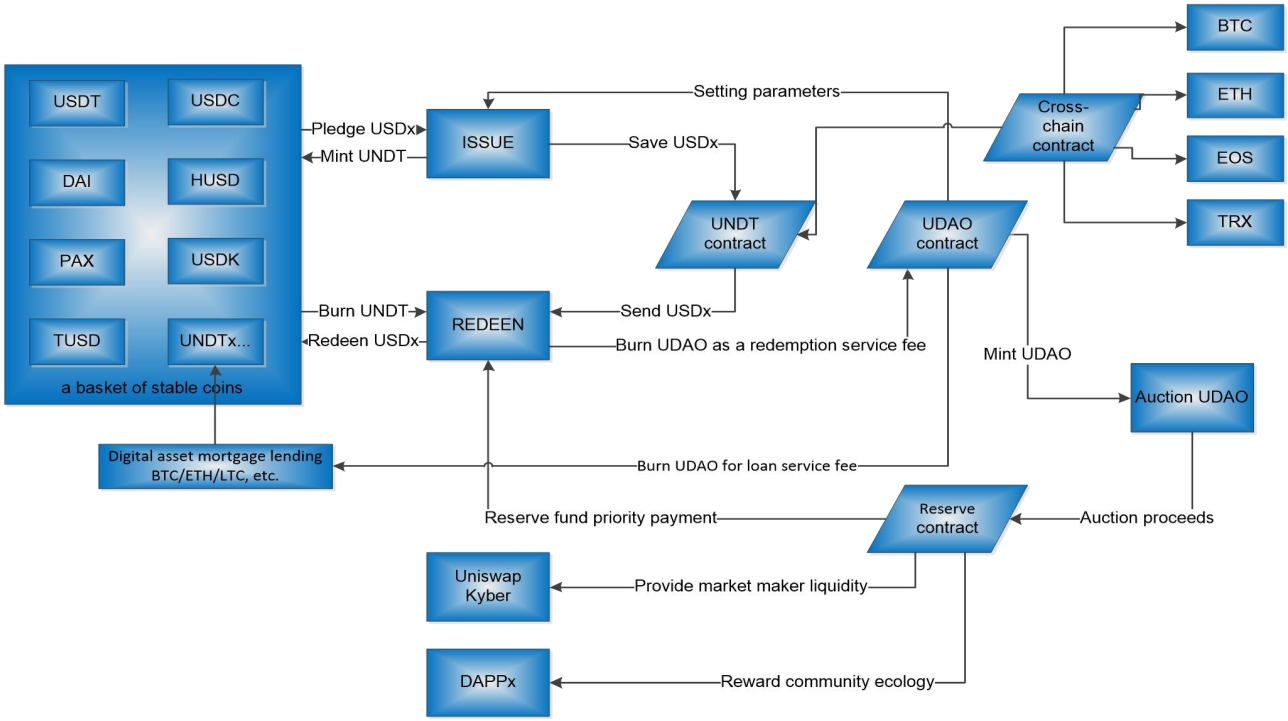
- Automatic fund collection function. The owner of the UNDT private key can set the fund collection address of this address and automatically forward a receipt of UNDT to the collection address. This function can save costs and reduce processing process for exchanges and merchants that need a large number of accounts to collect money.
- Account remark function. With UNDT, transaction notes can be added to facilitate identification of business ownership.
- Bank card function. When using UNDT, transfers can be made to 19-digit accounts similar to international bank cards, in addition to ordinary addresses. The payee may provide the payer with a 19-digit card number for collection. Users who do not have the condition to open a common international bank card can open an account free of charge and apply for a UNIONDAO card with the function of receiving/storing/sending UNDT. This innovation will benefit billions of people around the world.
- Merchant initiates collection function. The merchant (DAPP) can initiate the collection and transfer UNDT to its account in one step. The user only needs to confirm authorization once.

UDAO Coinage Contract

Through the open and continuous auction on the chain, UDAO coins are minted in a way that anyone can participate in the fair bidding. The auction activity will be held every 24 hours, and the system will automatically adjust and reduce the next auction amount, [current auction amount = (100 million pieces - total minted COINS) / 1000], which will never stop. Users will get UDAO within 24 hours of participating in the auction, [auction settlement price of this period = total amount of bidding in this period/auction amount of this period], [auction income of this period = amount of bidding in this period/auction settlement price of this period]. The money from the mint will be allocated to insurance contracts, market making contracts and management contracts.

Across the chain application

UNIONDAO protocol realizes the deployment on the third party public chain by adopting cross-chain technology, and supports the transfer of UNDT assets between cross-chains.



Single asset mortgage UNDTx vs multiple asset mortgage UNDTx

The first edition of UNDTx will accept only one collateral asset, the Ether pool. Over the next 6-12 months, we plan to upgrade the single asset-backed UNDTx to multi-asset-backed UNDTx. The main difference is that multiple asset collateralizations can support any recognized digital asset.

Ethernet pool (transitional mechanism of single asset mortgage stage)

In the first release, ether pool (PETH) will be the only accepted mortgage asset type. At this stage, users who want to create CDP and generate UNDTx need PETH first. The operation is simple. The user only needs to put the Ethernet (ETH) into a special intelligent contract, which integrates all the Ethernet stored by the user into an Ethernet pool (PETH) and gives the user the corresponding ETH value PETH.

If ETH's market price suddenly drops and the debt in its mortgage position exceeds the value of its mortgage assets, the Union platform will automatically dilute the ether pool (PETH) for asset restructuring. This also means that the number of convertible ethers for PETH will decline.

After the Union system is upgraded to multiple mortgage assets, the ether pool (PETH) will be removed and replaced by ether and other mortgage asset types.

Price stability mechanism

The target price

In the system of Union, UNDTx target price has two important functions: 1) it is used to calculate the mortgage debt ratio of the mortgage debt position and 2) it determines the price of mortgage assets that UNDTx holders will receive in the event of global liquidation.

The initial target price will be 1:1 with the dollar and will gradually become soft anchored to the dollar.

Feedback mechanism of target price change rate

When the market is unstable, the target price rate feedback mechanism is activated. The target price rate feedback mechanism allows UNDTx to keep the dollar price but away from a fixed percentage of dollars.

The feedback mechanism of the rate of change of target price is that UNDTx stabilizes the monetary system by adjusting the rate of change of target price to promote market forces to maintain the stability of UNDTx market price. The rate of change of target price will determine the change of target price, which can motivate people to hold UNDTx (when the rate of change of target is positive) or borrow UNDTx (when the rate of change of target is negative). When the target price rate feedback mechanism has not started, the target price rate will be set to 0%, which means the target price will not change, UNDTx and dollar hard anchoring.

When the target price rate feedback mechanism starts, the target price rate and the target price itself will dynamically change to balance the demand and supply of UNDTx, so as to adjust the way users generate and hold UNDTx incentives. This feedback mechanism allows UNDTx's market price to move towards the target price, reducing UNDTx's price volatility and providing liquidity in the event of a demand shock.

Under the target price rate feedback mechanism, when UNDTx's market price is lower than the target price, the target price rate will increase. This raises the target price, making it expensive to generate UNDTx from CDP. At the same time, an increase in the rate of change of target price will increase the return on capital of holding UNDTx, which will lead to an increase in the demand for buying UNDTx. Reduced supply and increased demand will push UNDTx's market price up towards its target price.

The same mechanism applies when the market price of UNDTx is higher than the target price: the rate of change of the target price decreases, which leads to the increase of the demand for generating UNDTx and the decrease of the demand for holding UNDTx, and thus the market price of UNDTx decreases and approaches the target price.

This mechanism is a reverse feedback loop: the market price of UNDTx deviates in one direction from the target price and generates forces in the opposite direction.

Sensitivity parameter

The sensitive parameters of the target price rate mechanism determine the degree of variation of the target price rate relative to UNDTx's market price and target price deviation. This parameter regulates the feedback scale of the system. Sensitive parameters are set by UDAO holders, but they have no direct control over the target price and the rate of change of the target price, which are determined by the market.

The sensitivity parameter also determines whether the target valency rate mechanism is activated. If the sensitivity parameter and target interest rate are both zero, UNDTx will be anchored to the current target price.

Global clearing step

Global clearing is the last resort to ensure that UNDTx holders' target price is redeemable. As global clearing occurs, the system will gradually shut down and UNDTx and CDP holders will receive their fair share of net worth convertible. This process is completely decentralized, with UDAO owners managing the system and ensuring that it is enabled only in critical emergencies. For example, the market is irrational for a long time, the system security is attacked and the system is upgraded.

Step 1: Start global clearing

If enough global liquidators, selected by the Union administrator, believe that the system is under serious attack or that a technical upgrade is needed for global clearing, they can initiate global clearing. This would halt the creation and operation of collateralised debt obligations and freeze them at a fixed value for all users to exchange.

Step 2: Perform global clearing conversions

When the global liquidation starts, there is a time for the Keepers to handle the corresponding claims for UNDTx and the mortgage holders based on the fixed feed. Upon completion of this process, all UNDTx and mortgage debtholders may exchange for a fixed percentage of ETH.

Step 3: UNDTx exchanges collateral with mortgage holders
Each UNDTx and CDP holder can make an exchange request on the Union platform to convert their UNDTx and mortgage holdings directly into a fixed amount of ether based on the asset value calculated based on UNDTx's target price.

For example, if UNDTx's target price is $1 and ether is $200 per dollar and the user holds 1000 UNDTx at the start of global clearing, the user can redeem exactly 5 ethers from the Union platform at the end of the clearing process. There is no time limit for the final exchange time.

Systematic risk management

Holders of UDAO may vote to participate in the following risk system actions:

- Add new types of mortgage debt: create a new type of mortgage debt with unique risk parameters. A new type of mortgage position may be a new type of mortgage asset or a new combination of existing mortgage asset classes.
- Modify the class of existing mortgage debt: modify the risk parameters of one or more classes of existing mortgage debt.
- Modify sensitive parameters: change the sensitivity of the feedback mechanism of target price change rate.
- Modify the target price change rate: the manager can adjust the target price change rate. In practice, adjusting the target price rate can only be achieved if the UDAO holder wishes to anchor the UNDTx price to the current target price. This will be done by adjusting the sensitive parameters together. By setting the sensitive parameter and target price change rate to zero, the feedback mechanism of target price change will fail and UNDTx's target price will anchor its current value.
- Choosing the Oracles: The Union platform captures the internal price of collateral and the market price for the UNDTx with a decentralized prophecy infrastructure, which contains a wide range of individual prophet nodes. UDAO holders control which nodes can act as trusted predictors and how many. As long as more than half of the prognosticators work properly, the system security will not be damaged.
- Adjust feed sensitivity: changes to determine the extent to which feed affects the internal price of the system.
- Select global liquidator: global liquidator is the key mechanism that Union platform can resist the attack of prophecy machine or management step. The management mechanism selects global liquidators and determines how many liquidators are needed to initiate global clearing.

Risk parameters

UNDTx stable monetary system in the mortgage debt position (CDP) has a number of risk parameters. Each CDP class has its own set of risk parameters that determine the risk profile of the CDP type. These parameters are determined by a vote of the holders of the UDAO (a UDAO represents one vote).

Key CDP risk parameters include:

- Debt ceiling: the debt ceiling is the maximum amount of debt that can be created by a single type of CDP. Once the debt created by a certain type of CDP reaches the ceiling, no new UNDTx will be created unless the existing CDP is redeemed. The debt ceiling is used to ensure that mortgage portfolios are sufficiently diversified.
- Liquidation ratio: the liquidation ratio is the mortgage/debt ratio when the CDP is liquidated. Lower liquidation ratio means UDAO voters expect lower price fluctuation of mortgage assets, while higher liquidation ratio means UDAO voters expect higher price fluctuation of mortgage assets.

- Stabilization cost: stabilization cost is the cost of each CDP. An annualized percentage of debt incurred based on CDP that must be paid by CDP holders. Stabilization fees are priced with UNDTx but can only be paid in UDAO tokens. The amount of UDAO to pay depends on UDAO's market price. After payment, the UDAO is destroyed and removed from circulation.
- Penalty ratio: the penalty ratio is used to determine the maximum UNDTx amount to purchase and destroy UDAO supplies in a liquidation auction. The remaining mortgage assets in the CDP are returned to the holders of the CDP prior to liquidation. The penalty ratio is intended to improve the efficiency of the clearing system. In the case of UNDTx, a single mortgage asset, the liquidation penalty is used to purchase and destroy PETH, increasing the percentage of PETH convertible ETH.

UDAO Token Management System

In addition to obtaining stable fees from CDP, UDAO holders play an important role in the management of the Union platform.
The management of the platform is through the voting of valid proposals of UDAO holders. The effective proposal is to modify the internal management variables of the Union platform through the intelligent contract voted by UDAO. Proposals can be divided into two forms: single action proposal contracts and agency proposal contracts.
A single action proposal contract can only be executed after root access is obtained. Internal management variables change immediately after execution. After one execution, a single action proposal is deleted and invalidated. This proposal will be used in the first phase of the system, which is not very complicated to use, but has less flexibility.

The proxy action proposal contract is a second layer of administrative logic through the continuous use of root authority. The second layer of management logic can be relatively simple, such as designing a weekly poll on risk parameters. It is also possible to apply more advanced logic, such as limiting the scope of administrative action over a set period of time, or even removing the license for its underlying agency action proposal contract.
Any Ethernet account can deploy a valid proposal smart contract. UDAO holders may elect one or more proposals as valid through UDAO token approval votes. Smart contracts with the most votes will be effective proposals.

UDAO and various mortgage assets UNDTx

After upgrading to multiple mortgage assets UNDTx, UDAO will replace PETH to play a more important role in the asset restructuring process. When the market crashes and CDP ran out of collateral, UDAO automatically increases supply and buys back enough money from the market to recapitalize the system.
Each CDP type has its own unique liquidation ratio, which is determined by the UDAO holder and based on the specific mortgage asset risk of this CDP type.
When CDP falls below its liquidation ratio, liquidation is initiated. The Union platform will automatically buy the mortgage assets in the CDP and gradually sell them. In the UNDTx phase of single mortgage assets, there will be a transition mechanism called liquidity supply contract, while in the UNDTx phase of multiple mortgage assets, the auction mechanism will be initiated.

Liquidity supply contract (single mortgage phase transitional mechanism)

In the UNDTx phase of a single mortgage asset, the liquidation process is called a liquidity supply contract. An intelligent contract to trade directly with Ethereum users and caregivers based on system feed rates.
When a CDP is liquidated, the system immediately collects its collateral. CDP holders receive the remaining mortgage assets after debt, stabilization fees, and liquidation penalties.
PETH mortgage assets will be sold in liquidity supply contracts and caregivers can automatically trade UNDTx to buy PETH. All payments to UNDTx are immediately destroyed from circulation until the amount of CDP debt is eliminated. If there is any

UNDTx left after the CDP debt is removed, the UNDTx part will be used to buy and destroy PETH, thus increasing the proportion of PETH convertible into ETH. This will be a benefit to PETH holders.

If the PETH sold does not raise enough UNDTx to cover the entire debt, the system will issue additional PETH and sell it. The newly created PETH in this way will reduce the proportion of PETH convertible into ETH, thus reducing the income of PETH holders.

Debt auction and mortgage asset auction (multiple mortgage stage mechanisms)

In the event of liquidation, the Union platform will purchase the collateral in the CDP and gradually sell it through an automatic auction. The auction mechanism allows the system to process CDP even when price information is not available.
In order to be able to buy back the mortgage assets in the CDP and sell them, the system first raises enough UNDTx to pay off the CDP debt. The process, known as a debt auction, involves issuing additional UDAO supplies and selling them to bidders in a auction. At the same time, CDP's mortgage assets will be sold in a mortgage auction, and the CDP debt and settlement penalty portion will be used to buy and destroy the UDAO. This can directly offset the issuance of UDAO in a debt auction. If there is enough UNDTx to pay off the debt in the CDP plus the liquidation penalty, the mortgage auction is converted to a reverse auction where the minimum collateral is sold - any remaining collateral is returned to the original owner of the CDP.

Significant external participants

In addition to the smart contract infrastructure, the Union platform relies on a number of external participants to keep it running. Caregivers and outside participants will take advantage of the economic incentives of the Union platform to act. Predictors and global liquidators are special external actors appointed by UDAO holders.

Care Machine (Housekeepers)

Housekeepers are independent players (often automated) driven by economic incentives to contribute to decentralized systems. In UNDTx's stable monetary system, the Housekeeper participates in debt auctions and mortgage auctions during CDP liquidation. Housekeeper also trade UNDTx around target price. UNDTx will be sold when the market price is higher than the target price. Similarly, when the market price is lower than the target price, the manager will buy UNDTx. This is done to benefit from the market's long-term price convergence target price.

The Oracles

The Union platform needs real-time pricing information on pledged assets to decide when to trigger liquidation. The Union platform also needs UNDTx's market price to trigger a rate feedback mechanism when it deviates from the target price. The predictive machine (Oracles) of UDAO holder's trust selection is based on Ethernet transaction to feed UnionDAO platform.
In order to protect the Oracles in the system from being controlled by attackers or other collisions, the feeding sensitivity index is used as a global variable to change the maximum feeding rate received by the control system.
Here is an example of how the feed sensitive index works. If feed valence sensitive index is "15 minutes 5%", feed valence cannot exceed 5% in the change of 15 minutes, the change of 15% needs 45 minutes. This limit would allow enough time for a global reckoning, even if hackers had managed to take over most of the Oracles.

Global liquidator

The global liquidator is an external player like the price feeders, the last line of defense after UNDTx's stable monetary system was attacked. UDAO holders select and authorize global liquidators to trigger global clearing. Beyond this mandate, the global liquidator has no special control over the system.

Usage Flow

Anyone can use UNDT to stabilize the monetary system without any restrictions or registration process.
Case 1: Jake wants to generate 100 UNDTx. He locks ETH, which is worth much more than 100 UNDTx, into CDP and USES it to generate 100 UNDTx. The 100 UNDTx generated are immediately sent directly to his Ethereum account. Assuming a stabilization fee of 1% per year, if Jake decides to redeem his locked ETH after a year, he needs 101 UNDTx to pay off the CDP.
One of the main applications of CDP is leveraged trading.

Case 2: Jake wants to leverage the ETH/UNDTx, so he deposits $150 worth of ETH in the CDP to generate $100 worth of UNDTx. He then buys another $100 ETH with the newly generated UNDTx, which gives him a 1.66-fold ETH exposure to U.S. dollars. He has the option to dispose of the $100 ETH from the sale of UNDTx, while the original ETH mortgage ($150) remains locked in the CDP until the debt is paid plus the stabilization fee.
Although CDP is not interchangeable, ownership of CDP is transferable. This allows CDP to be used in more complex intelligent contracts for generating UNDTx (such as introducing more than one actor).

Case 3: Alice and Jake work together to generate $100 worth of UNDTx with ETH collateral under an Ethereum OTC contract. Alice contributed the $50 ETH and Jake contributed the $100 ETH. The OTC contract generated the money into a CDP, which became the $100 UNDTx. The new UNDTx is automatically sent to Jake. In Jake's opinion, he buys $100 worth of ETH by making payments of the same value. The contract then transfers ownership of CDP to Alice. Alice ended up with $100 worth of debt (UNDTx) and $150 worth of collateral (ETH). Since Alice only had ETH worth 50 dollars at the beginning, she now has three times as many ETH verus US Dollars.
Clearing guarantees that in the event of a collapse in the price of the mortgage assets in the CDP, the system will automatically shut down the CDP which is too risky, ensuring that the outstanding UNDTx is fully mortgaged and solvent.
Case 4: let's assume that the liquidation rate of an etheric CDP class is 145%, the penalty rate is 5%, and the existing mortgage rate of this etheric CDP is 150%. The price of ether then fell by 10 per cent against the target price, bringing the CDP mortgage ratio down to 135 per cent. Since the mortgage rate is lower than the liquidation rate, traders can trigger liquidation and start buying UDAO with UNDTx in the debt auction. Traders can also use UNDTx to bid for 135 UNDTx in the mortgage auction. Once there is a bid for no less than 105 UNDTx, the trader starts a reverse bid for the minimum amount of mortgage ether, with the remainder going back to the original CDP owner.

The potential market

As stated in the introduction, a cryptocurrency with price stability is a fundamental requirement for most decentralized applications, which makes the potential market for UNDTx larger than the entire blockchain industry. As a price stable cryptocurrency that can be used as a decentralized leverage trading platform, here is an list of potential markets (including blockchain and other industries) where UNDTx stable currency system can be put into use immediately:

- Prediction market & betting applications: people are reluctant to bet on a cryptocurrency with unstable prices in predictions unrelated to the currency they are betting on. Long-term bets are impossible, especially for those betting on the future price

of an asset whose price is volatile. As an alternative, cryptocurrencies like UNDTx with price stability are a natural choice for prediction markets and gaming users.

- Financial markets: hedging risk, derivatives, leveraged trading, etc. CDP makes it easier for users to leverage. UNDTx is a stable and reliable collateral asset that can be used in custom derivatives smart contracts such as options and CFD.
- Trade receipts, cross-border transactions and remittances: reducing foreign exchange volatility and eliminating middlemen means that using UNDTx can significantly reduce the transaction costs of international trade.
- Transparent accounting systems: charitable, non-profit and government sectors can achieve a more efficient and less corrupt accounting system with UNDTx.

Major risks and mitigation measures:

There are many potential risks in the development, deployment, and operation of UNDT stable currency. It is necessary for the Union community to minimize these risks in the manner necessary. The following is a list of major risks and corresponding risk mitigation measures:

Malicious hacking of smart contract infrastructure

One of the biggest risks in the early days of the system is that malicious developers discover intelligent contract vulnerabilities and break or steal before the vulnerabilities are fixed. In the worst-case scenario, all the decentralized digital assets used as collateral in UNDT's stable money system may be stolen and cannot be recovered.

Mitigation measures:

Intelligent contract security has been a top development priority since the UNDT project was launched. The underlying data has been independently audited three times by the best security experts in the blockchain industry.

In the longer term, the risk of a system being hacked can theoretically be eliminated by canonical verification of the code, which means using functional programming to mathematically prove that the code base is free of any security holes. Although full specification validation is a very long-term goal, we have put a lot of work into it.

A black swan event involving a single or multiple mortgaged asset

UNDT's mortgage assets have the greatest risk of a black swan event having the greatest impact. This can happen either in the early stages of UNDT's stabilization of the monetary system, before UDAO is able to issue additional resources for asset restructuring, or after UNDT's stabilization of the monetary system supports multiple portfolios of mortgage assets.

Mitigation measures:

By limiting the risk limit of mortgage assets and providing mortgage insurance pool to minimize this risk.

Competition & user ease of use

As mentioned earlier, there is a lot of money and talent invested in the development of stable cryptocurrencies. Due to "real decentralization", UNDT stable currency system is currently the most complex and considered model in the blockchain industry. One predictable risk is that cryptocurrency users prefer simple, centralized digital assets to decentralized stable currencies (like UNDT).

Mitigation measures:

We expect UNDT to be an easy currency for ordinary cryptocurrency users. UNDT will adopt the ERC20 standard with high mobility in the Ethereum ecosystem. The average user does not need to know the mechanics behind UNDT to work with UNDT.

Price error, irrationality & unexpected events

Many unforeseen events may occur, such as the price dynamics of the prognosticator being wrong, or other irrational market dynamics causing UNDTx prices to fluctuate over a long period of time. Once the system loses confidence of the community, the target rate of price change or even UDAO dilution does not bring liquidity or price stability.

Mitigation measures:

The Union community will encourage enough capital to play the role of caretaker in order to maximize the degree of rationality and market efficiency, while maintaining stable UNDT supply increase in case of market shock.

The problem with centralized architecture

The Union team will play a major role in the development and governance of UNDT in the early stages of stabilizing the monetary system - budgeting expenses, hiring new developers, seeking partners and institutional users, and communicating with regulators and outside major stakeholders. If the Union team fails due to incompetence, legal reasons or management external issues, UNDT risks of having no backup plan for stabilizing the monetary system.

Mitigation measures:

Part of the function of the Union community is to act as a decentralized counterparty to the Union team. This is a loose collective of independent participants. Since they hold UDAO digital assets, they have a strong incentive to see UNDT succeed in stabilizing the monetary system. In the early stages of UDAO release, the core developers received a significant amount of UDAO benefits. When the UnionDAO team is no longer the front-line development focus for UNDT to stabilize the monetary system, a large number of individual UDAO holders will fund developers due to economic incentives or develop their own to ensure their investment safety.

Conclusion

UNDT stable currency system is designed to address the important issue of the De-Fi ecology and the stable exchange of value in the broader blockchain economy. We believe that UNDT's creation, trading, and buyback mechanisms, as well as the direct risk management capabilities of UDAO holders, will enable self-interested minders to effectively maintain UNDT price stability. The Union founding team has established a prudent management roadmap that fits both short-term agile development and long-term decentralized design. Our development plans are ambitious and have made it our mission to ensure that UNDT are widely used.

The Glossary

UNDT: Union Network Dollar Token, a cryptocurrency with price stability features, common exchange assets in UNIONDAO protocol.

UNDTx: Cryptocurrency with price stability features, UNDTx stabilizes exchange assets in the monetary system. ERC20 standard Ethereum token.

Stable Assets Collateralized Debt Positions (ACDP): User deposits a 1:1 Stable currency asset as collateral, generating UNDT.

Collateralized debt obligations (CDP): Smart contracts for receiving assets (UNDTx) as an effective debt instrument with an interest rate. CDP users guarantee their debt position by depositing collateral that exceeds the value of the loan.

Debt auction: A reverse auction in which UDAO is sold to obtain UNDTx in case of insufficient CDP collateral to meet emergency obligations.

Mortgage auction: Sale of mortgaged assets in a liquidated CDP, with the process designed first to enable the repayment of the obligations in the CDP, and then to return the mortgaged assets to the owner at the best possible price.

Union team: Develop and launch the decentralized intelligent contract developer team of Union platform.

Caregivers: Independent economic participants. By trading UNDTx, CDP or UDAO, generate UNDTx or close CDP and pursue arbitrage opportunities in UNDTx stable monetary system to help UNDTx maintain market rationality and price stability.

UDAO: ERC20 tokens used for voting by UDAO voters and as support in the event that CDP cannot be repaid.
UDAO voters: UDAO voters actively manage UNDTx's risk of stabilizing the monetary system by voting on risk parameters.
UnionDAO: Decentralized autonomous organization of UDAO platform technical infrastructure and UDAO voters.
UnionDAO foundation: Non-profit foundation registered in Singapore.
Prophecy machine: Ethereum account (contract or user) used to provide data dynamics for UNDTx's stable monetary system for multiple aspects.
Risk parameters: Variables that determine when the UNDTx stable monetary system automatically judges a CDP to be too risky and allows the management machine to liquidate it.
Sensitivity parameter: Variable that determines the degree to which UNDTx stable monetary system adjusts the target price rate when UNDTx market price deviates.
Target price rate feedback mechanism: UNDTx stabilizes the monetary system by adjusting the target price rate so that the market price remains stable near the target price.

Contact

Official website: https://uniondao.com
Mail box: foundation@uniondao.com