The USDJ Stablecoin System

White Paper



https://just.network

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By the JUST Team

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I. About USDJ Stablecoin

TRON network offers varieties of quality assets, but most of them are not viable for everyday use because of their high volatility.

USDJ is a new currency generated through decentralized smart contracts on the TRON network. Anyone can pledge TRX as collateral to generate USDJ. USDJ enters into free circulation as any other cryptocurrency does once generated. It is pegged to the US dollar through Collateralized Debt Positions (CDPs), and also has autonomous feedback mechanisms.

USDJ Stablecoin is a USD-pegged cryptocurrency backed by collateral assets. We believe that USDJ will become an integral part of the TRON DeFi ecosystem.

II. USDJ Stablecoin System

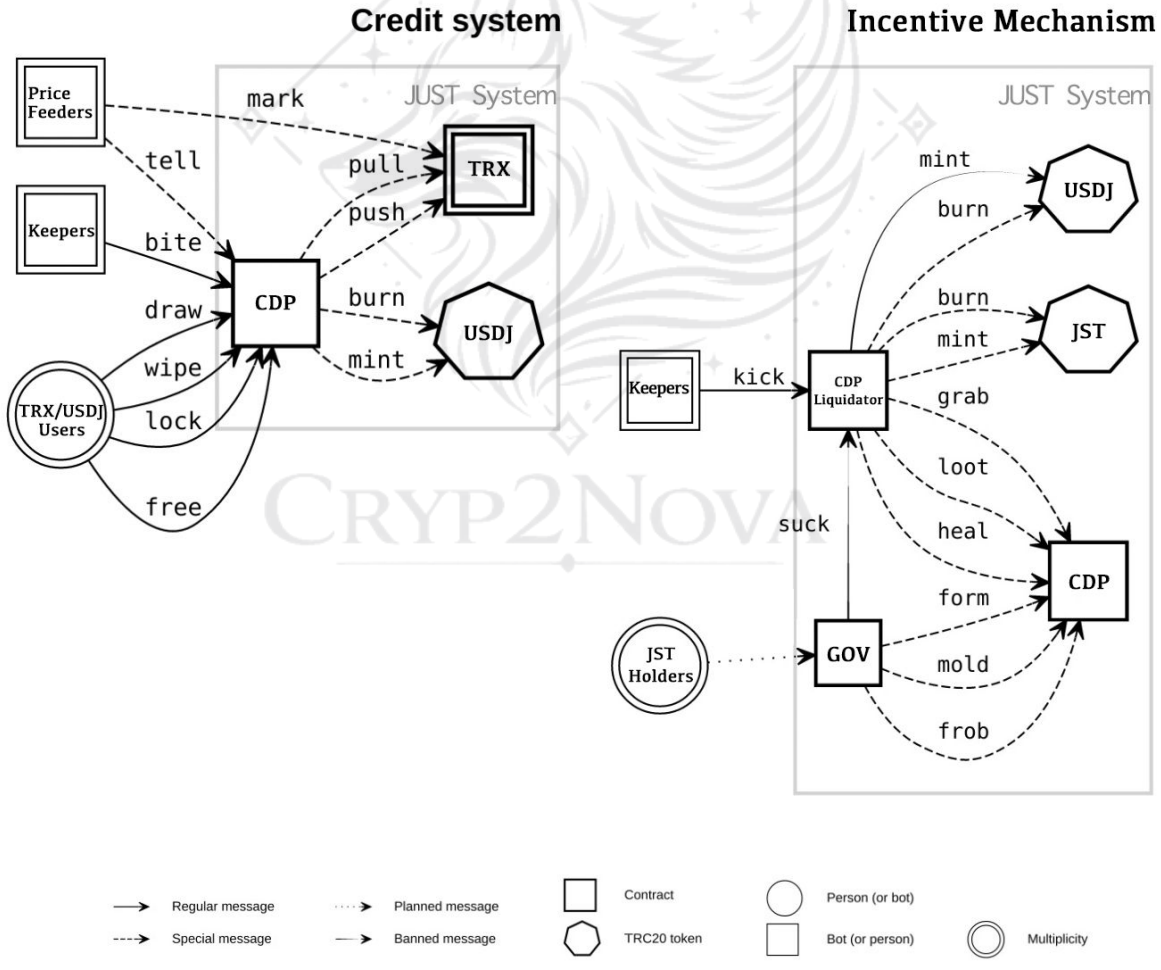


Figure 1. Core Mechanism of the JUST System

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USDJ mortgage lending system and decentralized autonomous incentive mechanism are the core parts of JUST. Please find the details below.

III. Use Collateralized Debt Positions (CDPs) to Generate USDJ

USDJ is generated through depositing collateral assets into CDP. Here are the steps:

1. Obtaining the collateral assets

Exchange the TRX to be pledged for PTRX, which is the only collateral assets accepted by the system for the moment.

2. Creating CDPs to deposit collateral assets

Send a transaction to JUST to create a CDP, then send another transaction to deposit PTRX, the collateral asset, into the CDP to generate USDJ.

3. Generating USDJ through CDPs

The CDP holder sends a transaction to specify the amount of USDJ generated in the CDP. Meanwhile, the same amount of debt will be created, and the collateral asset is locked up and not available for redemption until the debt is repaid.

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4. Redeeming the collateral

To redeem the collateral, the debt must be repaid with USDJ along with a stability fee paid with JUST platform token, JST. Finally, CDP holders can send a transaction to JUST to retrieve all collateral assets.

If a price slump of the collateral makes it at risk of being unable to cover the debt, the CDP liquidation will be triggered to auction the collateral for repayment. Any remaining value net of the debt and the penalty fee will be kept in the CDP for withdrawal.

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IV. Price Stability Mechanism

The starting Target Price of USDJ is pegged at 1.0 to the US dollar. In the JUST system, USDJ Target Price serves two main functions:

1. To calculate the debt-to-collateral ratio of the CDP.
2. To determine the value of collateral assets that USDJ holders will receive upon Global Settlement.

In the event of market instability, a Target Rate Feedback Mechanism (TRFM) will be triggered to maintain the same denomination of USDJ. The Target Rate Feedback Mechanism is a process in which the USDJ Stablecoin System helps to adjust the Target Rate, so as to mobilize market forces to maintain the stability of USDJ price.

The Target Rate determines the change of the Target Price, which incentivizes people to hold USDJ when the value is positive and lend USDJ when it's negative. Such a feedback mechanism maintains the market price of USDJ around the Target Price, thus dampening the price volatility of USDJ and injecting liquidity during demand shocks.

Under the Target Rate Feedback Mechanism, once the market price of USDJ falls below the Target Price, the Target Rate will increase, making it more expensive to generate USDJ with CDPs. In the meantime, an increased Target Rate will drive up the capital gains of holding USDJ, thus increasing the demand for USDJ. In this way, the reduced supply and increased demand will push up the market price of USDJ back towards its Target Price.

Likewise, when the market price of USDJ rises above the Target Price, the same mechanism takes effect by decreasing the Target Rate, and thus driving down the market price back towards the Target Price.

V. Global Settlement Mechanism

When the USDJ price that the system receives from Oracles deviates drastically from the US Dollar during a system attack or malicious control which causes intolerable risks within the system, global settlers designated by JST holders can trigger the Global Settlement Mechanism that is carried out in the following steps:

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1. Global Settlement is activated

After Global Settlement is activated, CDPs can no longer be created or adjusted and the Price Feed will be frozen at a certain value to process all users' claims.

2. Global Settlement claims are processed

Meanwhile, Keepers in the JUST system will auction the debt and collateral assets based on the fixed Price Feed in a decentralized way in order to process corresponding claims of all USDJ and CDP holders.

3. USDJ and CDP holders claim their collateral

After Keepers process all Global Settlement claims, each USDJ and CDP holder can submit a claim request on JUST to directly exchange their USDJ or CDPs for a fixed amount of TRX based on the Target Price of USDJ. No time limit is set as for when users can take this step.

VI. Risk Management

To effectively manage and control potential risks, USDJ stablecoin system is armed with a comprehensive risk-management system. On one hand, JST holders elect key decision makers through their votes to regulate risks across the system. On the other hand, JST holders may also vote with JST to participate in setting up and modifying the risk parameters.

Risk management consists of the following components:

1. Modification of Sensitivity Parameter

Modify the sensitivity of the Target Rate Feedback Mechanism (TRFM).

2. Modification of Target Rate

Administrators may change Target Rate. In real practice, when JST holders want to peg the price of USDJ to the current Target Price, they may set Sensitivity Parameter and Target Rate at zero to achieve the goal.

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3. Choosing a set of trusted Oracles

JUST platform obtains the internal price of collateral and the market price of USDJ through decentralized Oracles. JST holders can control the number of Oracle nodes and designate specific nodes as trusted Oracles. The system operates safely as long as over half of the Oracles function properly.

4. Modification of Price Feed Sensitivity

Changes in Price Feed Sensitivity affects the system's internal prices to a certain extent.

5. Choosing a set of global setters

Global setter is a crucial mechanism for JUST platform to survive attacks against the Oracles and the governance steps. The mechanism chooses a set of global setters and determines how many global setters are needed to activate a global settlement.

6. Setting up parameters for risk-control

To maintain the stability of the price of USDJ, the JUST system sets up multiple parameters for risk-control to regulate the Collateralized Debt Positions, all of which will be put up for vote and determined by JST holders.

1). Debt ceiling

Debt ceiling is the maximum amount of debt that can be created by CDP. Once the debt ceiling is reached, it becomes impossible for CDP to create new USDJ unless existing CDPs are closed.

2). Liquidation ratio

Liquidation ratio is a ratio of the collateral-to-debt when a CDP is liquidated. A low liquidation ratio means JST voters expect low price volatility of the collateral, while a high liquidation ratio means high volatility is expected.

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3). Stability fee

A stability fee is the extra fee charged on users when they pay back the debt after borrowing USDJ from CDPs. The stability fee is priced by USDJ and repaid only in JST. Once repaid, the JST will be burned and removed from the supply. The price of stability fee regulates the incentive of borrowing, and therefore controls the risk from the supply-and-demand end.

4). Penalty ratio

Penalty ratio is used to determine the maximum amount of USDJ bought and destroyed in liquidation auctions. The remaining collateral assets after the CDP liquidation will be refunded to the CDP holders before the liquidation. Penalty ratio is used to improve the efficiency of the liquidation mechanism, and the liquidation penalty will be used to buy and burn PTRX, benefitting the PTRX to TRX ratio.

VII. JUST System Governance

JUST system governance relies mainly on JST holders. While JST holders earn revenue from the stability fees of USDJ, they are also responsible for the governance of the JUST system, which is done through selecting valid proposals by JST voters.

Each JST holder can vote and select the contract he/she supports among all the smart contracts that modify the system parameters. The contract with the highest number of votes becomes a valid proposal and has the system permit to modify variables of JUST internal system governance as per the established logic. Valid contract proposals can be in two forms:

1. Single action proposal contract

Single action proposal contracts are proposals that can only be executed after gaining the root access, and after execution immediately applies its changes to the variables of internal system governance. The single action proposal will delete itself and become invalid. It’s easy to use but not flexible. This type of proposal will be adopted in the early stage of the system.

2. Delegating Proposal Contracts

Delegating Proposal Contracts are proposals that continuously utilize their root access through second layer governance logic. The second layer governance logic can be relatively simple,

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such as defining a protocol for holding a weekly vote on updated risk parameters. It can also implement more advanced logic, such as restrictions on the magnitude of governance actions within defined time periods, or even deleting permissions of its third layer Delegating Proposal Contracts with restrictions.

There is no special requirement for proposal initiation. Any TRON account can submit suggestions for improving the JUST system by deploying valid smart contracts. JST holders can use their JST tokens to cast approval votes for one or multiple proposals that they want to select as the valid proposal. This mechanism ensures that JST holders fulfill their obligation of governance in a fair and just manner, and that suggestions carried in these valid proposals are safely deployed in the JUST system.

We believe that under successful community governance, USDJ will bring into full play its advantages as a stablecoin and be widely applied across the TRON network.

VIII. Resources

JUST Official Website: www.just.network
Product Website: just.tronscan.org

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