

**Bandot: Building Fully Trustworthy  
Stable Coin and Polkadot Ecosystems  
V2.0**

**2019.08**

# 1. Abstract

Bandot is a decentralized and smart contract management stable coin that holders can use to collateralize their flowable digital assets.

Users between parachains can convert to a proprietary smart token by bailing the corresponding number of BDTs to the Bandot repeater. Using the interconnection of Bandot network service gateways to form a smart token circulation network, the token economy between different parachains can be exchanged for instant and safer and more convenient.

From the perspective of this article, a trustworthy stabilization mechanism may not only reduce the risk of our existing major redemption methods, but also have a great chance to function as a value storage tool.

## 2. Overview

With the development of blockchain technology, in this growing field, project competitive advantage requires more and more innovative solutions to support. In today's blockchain field, almost every blockchain project is an independent ecosystem consisting of users, certificates and dApps (decentralized applications). Each blockchain project is in separate soil growing. With the continuous development of the industry, the lack of interoperability between such blockchain projects will become a barrier to future development.

Why is interoperability between blockchains so important?

In fact, the lack of interoperability has become an obstacle to the blockchain of business applications. Due to the lack of interoperability, digital assets on one chain cannot be

transferred to another chain. At the same time, smart contracts on different chains cannot interact.

To address this issue, many companies offer solutions at the application layer of the blockchain, claiming to provide a solution that can easily accomplish "interoperability of various blockchains" using its cross-chain protocol. However, this program is not decentralized.

What is a stable coin?

A stable coin is a special type of digital asset that represents the value of another coin or asset found outside of the asset's blockchain. Investors may consider it a derivative product because it involves related assets. "Stable" means that external assets are more stable relative to the value held by the asset in the current blockchain. Bitcoin and Ethereum are known for their volatility - this has become the gospel and bane of many investors. Stabilizing coins are linked at most by US dollars, providing investors with a stable investment approach involving multiple conversions between fiat coin and cryptocurrencies.

### **3. Introduction**

The Bandot protocol supports value interoperability between different parachains, enabling the trading on the Polkadot chain to be quickly traded and circulated. Users can issue smart tokens through the Bandot protocol and run them on parachains, automatically redeeming through the value anchoring of the Bandot algorithm and the pass-through on the parachains of the Polkadot Ecology. The prosperity of the general economy and the ease of circulation can reduce transaction costs. It will be better able to serve dApp development to enable developers to better design and distribute their own decentralized applications.

For dApp, the application of the certificate requires a reasonable design, and the Token will have different demands according to the user scale and development stage of the project. For dApp, Token's free circulation, fixed exchange rate, and independent pass policy are constantly improving and balancing.

The bottom layer of Polkadot provides us with the basis for cross-chain communication, so we don't have to spend a lot of effort to develop the underlying framework. On the basis of Polkadot, it provides us with a strong cross-chain infrastructure prospect and realizes a cross-chain solution. At the same time, the project Bandot serves as the payment and circulation value medium in the Polkadot ecosystem and promotes the application of the project.

All in all, stability and anti-censorship are desirable. Programmability provides a new solution to the traditional drawbacks of capital gains. The demand for a stable and fully functional digital coin may be high. The network effect may produce a small number of outstanding stable digital currencies, each of which will face the challenges of the market and channels. Of all the unproven assumptions, the possibility of creating a durable and stable digital goods still exists, so technology itself is the first challenge facing the industry.

## **4. The orientation of the products**

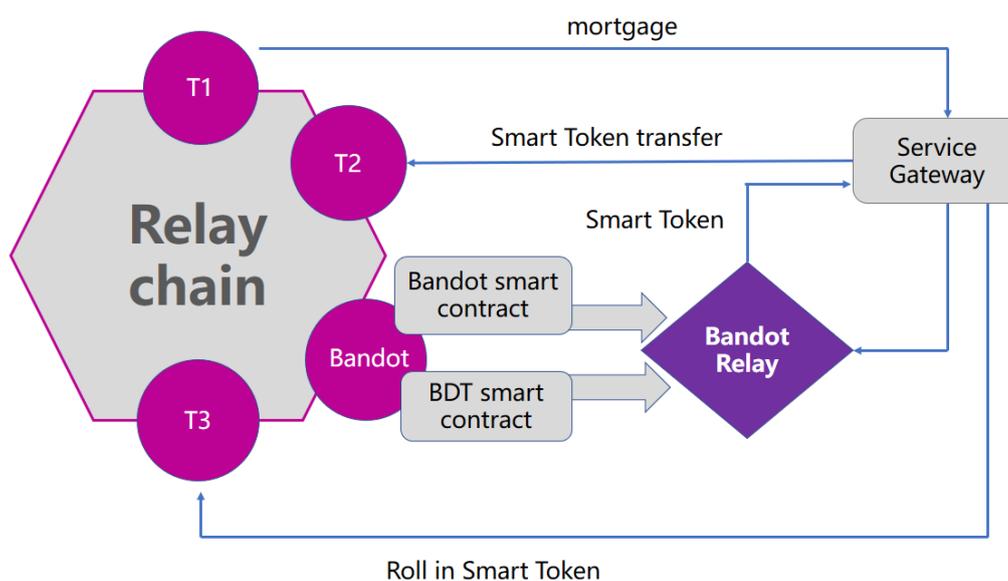
The Bandot protocol is deployed on a smart contract platform and runs on its own, positioning itself on a decentralized smart contract platform to fully implement the interoperability of BDT certificates.

The Bandot protocol is based on the Polkadot trust endorsement, which allows all parachains certificates to anchor the value of digital coin assets, increasing asset authenticity and reliability. In the process of asset cross-chain circulation, the

connection between users, data, and usage scenarios is completed. Users can freely realize cross-chain asset transfer between different applications, and finally form an ecosystem with free value circulation.

In the parachains of Polkadot, internal values need to flow more smoothly, and more cross-examination interactions between internal and external values are needed. The volatility of the cryptocurrency is continuous. When trading, it is unavoidable to be affected by different exchange rates, resulting in inconsistent amounts of asset transactions. Stabilizing coins have a stable legal price, are not affected by fluctuations, and are also an important part of the development of the global digital financial ecosystem.

## 5. Architecture



The application of Polkadot chain can realize communication through Bandot model. Bandot is a smart contract on parachain. It records the relationship between supply and value of tokens. The value of inflow and outflow of tokens is calculated by foreign coin repeater, and the value of cross-chain tokens is converted by automatic pricing. The Bandot protocol design smart contract is implemented in three phases. The first

phase is the initial creation and distribution of Smart Token function of the smart contract stable coin, the second phase mainly implements token trading and management, and the third phase emphasizes the cooperation of industry ecology.

Beyond Bancor Protocol.

Bancor is an ancient financial algorithm, which does not depend on bilateral demand matching. It uses connector as a bridge to realize asynchronous pricing mechanism. That is, the user can sell a token to a "connector" at any time according to the automatically calculated price, take out the collateral or exchange for other tokens, and the buying process is the same.

Bancor is an old financial algorithm that does not rely on bilateral demand matching. It uses a connector as a bridge to implement an asynchronous price mechanism. That is, the user can sell a certain token to the "connector" at any time according to the automatically calculated price, and take out the collateral or exchange for other tokens, and the buying process is also the same.

In the Bancor connector, the custom CW (connector weight, formerly called CRR, which is the constant reserve ratio), issues a certain number of its own token, which is called Smart Token in Bancor. Generally, if the buyer's demand increases, the price of Smart Token will increase accordingly; as the demand of the seller increases, the price of Smart Token will decrease accordingly. As for the ups and downs, you can control the project by customizing the CW according to the project party's definition of its own token.

Bancor's automatic pricing formula:

$$T = T_0 * (S/S_0)^{\left(\frac{1}{F} - 1\right)}$$

Buy formula:

$$E = R_0 \left( \sqrt[F]{1 + T/S_0} - 1 \right)$$

Sell formula:

$$T = S_0 \left( (1 + E/R_0)^F - 1 \right)$$

CW: Specify a parameter CW when issuing, the formula is as follows:

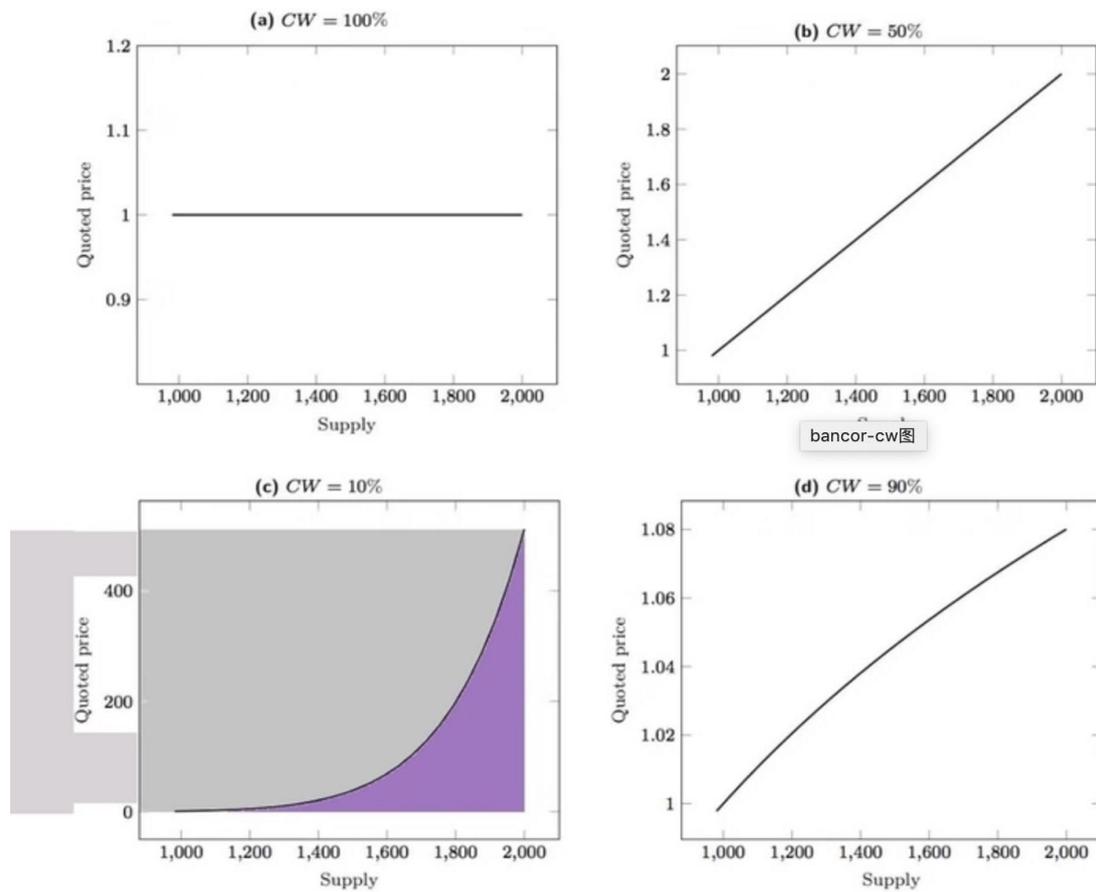
CW = connector token balance / total value of smart tokens

F is the connection weight

S Derivative coin

T derivative coin unit price (unit is T/A)

Adjusting the CW can adjust the price sensitivity, and the image can be listed according to the formula:



## 5.1. Tokens

The Bandot protocol mainly has two types of tokens:

- BDT is a stable digital coin anchored to the dollar. It plays an important role in the circulation of Bandot system.
- BDTS is a digital coin for market circulation, community incentives, promotion and airdrop use.

## 5.2. How to stabilize the BDT token price

Normally, the price of a BDT token is anchored at \$1. However, if the anchor price of

the BDT is less than \$1, the corresponding price in the secondary market will fall. What will happen?

The redemption price for a normal BDT token is \$1. If the BDT token price on the open market is \$0.95, the arbitrageur will be motivated to buy and redeem with a Bandot smart contract in exchange for a \$1 worth of collateral. At this point, the Bandot Smart Contract, which is responsible for monitoring the market value over time, adjusts the current BDT mortgage circulation amount according to the specific algorithm until the market price is equal to the USD 1 redemption price.

When the price of a BDT token is higher than \$1 in the open market, speculators will be willing to buy a new BDT token with a mortgage token worth \$1 and sell it immediately on the market. Bandot will also release part of the BDT token according to the specific algorithm, allowing speculators to make purchases until they are unprofitable, that is, when the market price is equal to the purchase price of \$1, and then join the guarantee in time.

### **5.3. BDT and BDTS**

Both the BDT token and the BDTS token are ERC-20 tokens that can be cast and destroyed. The BDT token transfer fee is variable and the initial value is 0. BDTS will be used for mortgage replacement of BDT certificates and for governance and voting.

### **5.4. Bandot Protocol**

The Bandot protocol is set to a smart contract runtime set, which mainly includes two smart contract modules:

- **Bandot Smart Contract:** It is mainly responsible for regulating the price stability and supply of BDT token, the mortgage of BDTS token, and the release and

conversion of smart tokens.

- BDT Smart Contracts: Responsible for managing and issuing BDT Certified Assets, tracking BDT tokens, and helping to control the supply of the entire system through additional destruction and distribution methods.

## **5.5. BDTs and BDT Rights and Interests**

- Income distribution

BDTS will allocate all revenue in the profit pool to all BDT holders proportionally.

- Participation in decision-making

Major events in the BDTS community will be voted by intelligent contract, and BDTS holders will directly participate in decision-making.

- Relay tokenizer election

Hold BDT to participate in the service gateway election or vote for other gateways.

## **5.6. Liquidity**

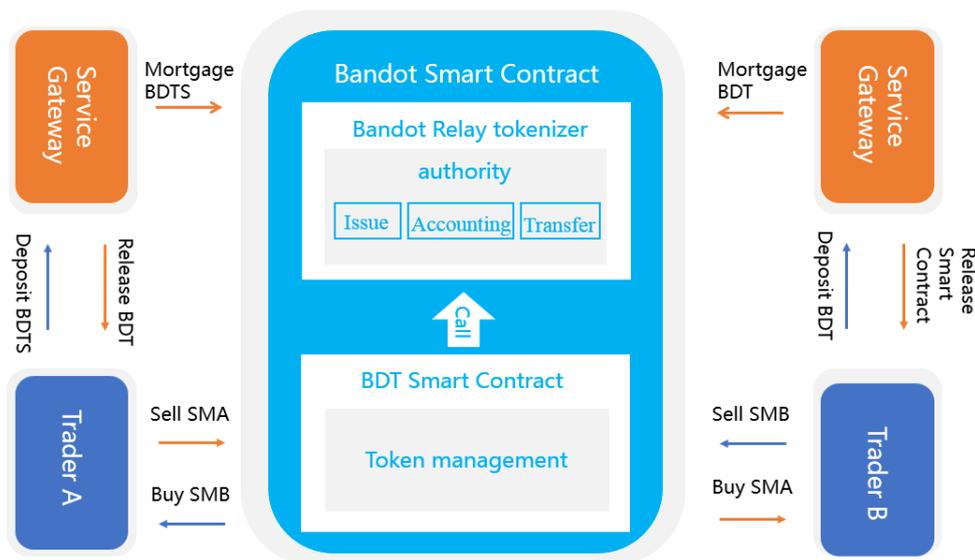
BDT stable coin is the core part of the entire Bandot protocol, and BDT stable coin is also the medium responsible for the value conversion between different chains. The user performs value collateral through BDT, and the smart contract outputs a corresponding amount of intelligent tokens according to the Bandot exchange rate algorithm. The token value between different parachains can be exchanged equivalently by Bandot and obtain timely liquidity.

As more and more asset types are clarified, the portfolio will gradually become more diverse over time.

## 5.7. dApps

In the future blockchain field, there will be more and more different companies to participate in, and there will inevitably be a demand for SMEs to issue tokens. In view of the small number of SMEs, the enterprise dApp application can only issue small-scale coins. The situation will cause the circulation of the dApps of small and medium-sized enterprises is not high, and the exchange price cannot be exchanged at the appropriate price through the market. The value interaction between different dApps is a problem worthy of attention. The Bandot agreement is to solve the problem of smart tokens for small and medium-sized enterprises. To enable different companies or individual users to publish and redeem the certificate and exchange easily and conveniently.

## 5.8. Smart Token Swap



The circulation of circulation between different parachains determines the integrity of the entire cross-chain ecology. Bandot plays an important role in intelligent asset exchange in the parachain, improving the ability to communicate with each other in parachains. Enhance the relay processing capabilities of Polkadot.

When a cross-chain transfer operation occurs, the cross-chain assets are first transferred out by the user, and then transmitted to the Bandot by the gateway, and the Bandot relay tokenizer performs token conversion. After the conversion is successful, the Bandot network contract operation is transmitted, and the smart tokens of both parties enter the respective parachains and transfer to the wallet.

## **5.9. Bandot Relay Tokenizer**

The Bandot relay tokenizer is composed of decentralized smart contracts. Once deployed, the code cannot be modified. All trading rules are written in smart contracts, which are not controlled by humans. Codes and laws are implemented. The user transfers the smart token to the Bandot relay by the gateway. The Bandot relay performs the conversion of the smart token to realize the circulation of the token value between different parachains. In the last chain, all the transactions of the smart token are transferred by the Bandot.

## **5.10. Become a Bandot Relay Tokenizer**

In order to fully reflect the concept of decentralization and the principle of everyone participation, Bandot will provide five Bandot relay quotas before the launch. Each Bandot relay has an initial mortgage amount of 100,000 BDTs. Users with BDT pass relevant trust rules. After that, all are eligible to participate in the relay mortgage. The mortgage results are available on the official website for inquiry and presentation, all of which are done on smart contracts. Users participating in the Bandot relay can share the revenue generated by the relay.

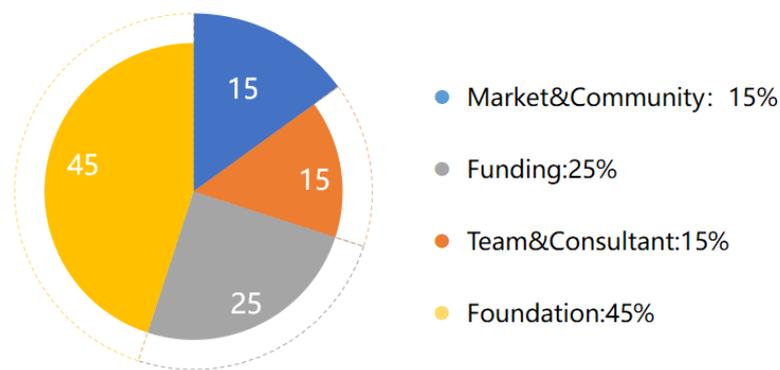
## **5.11. Exiting The Bandot Relay Tokenizer**

The mortgagor submits an application for withdrawal to the system. After verification by the system, the Bandot smart contract is returned to the user account according to the original record of the mortgage record.

## 5.12. Service Gateway

The service gateway bears the connection between Bandot and other parachains, and mainly carries the network transmission function of Bandot.

# 6. Economic Ecology



## 6.1. BDT Issuance

The circulation of BDT is: the specific number of generations is determined by the number of BDTS tokens in the market, and the mortgage is generated according to a certain algorithm. Different BDTS pricing will require BDTs with different pledges.

1.1, when BDTS is less than 1 US dollar:

The price of each BDT=BDTS price at the time \*N (1+5%);

1.2, when BDTS is higher than 1 US dollar:

BDT quantity = BDTS price at the time \*95% / BDT;

## **6.2. BDTS Token Issuance**

The release of BDTS tokens will be issued to different accounts according to the proportions in the figure. When the contract is created, the BDTS coins in the account can only be operated according to the rules and cannot be artificially interfered.

The release of BDTS is based on the principle of openness and transparency. All the issuance processes can be tracked and reviewed. The funds raised are all disclosed on the chain.

## **6.3. Token Release**

### **6.3.1. Team and Consultant: 15%**

All teams and consultants lock the tokens for one year, and then release 5% per month;

### **6.3.2. Private Equity: 25%**

All private equity tokens are locked for three months, and then released on a monthly basis in a year.

### **6.3.3. Market and Community: 15%**

The market and the community tokens are locked for one month, and then released monthly according to the following proportions: 2%, 1.5%, 2%, 2.5%, 3% and 4% of the total amount of tokens.

### **6.3.4. Foundation: 45%**

5% of the tokens are unlocked, which will be used for market support and partner incentives to contribute to the long-term development of the Bandot agreement;

5% of tokens are held and locked by the Foundation, which will be released in the

following proportions: 3 months after the private placement, 6 months and 9 months in the proportion of 1%, 1% and 3%;

The other 35% are held by the Foundation and locked up for one year after the private placement, and then released monthly within 24 months.

### **6.3.5. Funding**

The total amount of fundraising release is 25%, or 500 million, and the fundraising will be divided into two phases. The specific allocation is as follows:

The first phase distributes 50% of BDTS;

The second phase distributes 50% of BDTS;

## **7. Get BDTS**

### **7.1.1. Participation in Fundraising**

In the official channel to receive the cornerstone quota, a single user limit of 100 ETH, a real name review is required.

### **7.1.2. Get Rewards and Candy**

During the fundraising period, some of the Foundation's BDTS will be released and will be used for community rewards, promotion, etc. Including but not limited to code testing, code contributions, article writing, community airdrops, etc.

## **8. Ecological Construction**

The construction of block chain technology requires commercial application and

sustainable ecosystem development. The establishment of Bandot protocol on Polkadot is more desirable to provide an efficient licensing protocol to assist the rapid development of Polkadot ecology and support the landing of various business scenarios in the future.

### **8.1.1. Commercial Applications**

#### **1) Provide the entrance to Polkadot's future financial world**

Block chains attract the attention of financial services because they guarantee the security of transactions. It is believed that many financial enterprises will establish various dApps in Polkadot in the future, and that different parachains have certain requirements for the security, stability and timeliness of circulation. It is believed that Bandot will play an important role in financial services in the future.

The future digital financial world must be a world based on digital assets. In this future unified digital financial network ecosystem, the generation, circulation, storage, trading and use of digital assets are all in one chain. Users only need one client to manage and use their digital assets and digital currencies, trade, and easily convert between digital assets and digital currencies.

#### **2) Enhance the opportunity for the Internet to connect with Polkadot**

Bandot's stable currency support and trading of various financial project products, while users in the blockchain social network can directly transfer funds directly between each other through BDT. This process is actually an Internet information network user gradually. The process of value network switching based on blockchain.

With the continuous increase of BDT stable trial users, the integration of Internet-based information networks with blockchain-based value networks has actually been realized. There is also a qualitative improvement in the popularity of blockchain usage. The

blockchain also directly helps users visually see and use the asset information of the blockchain.

### 3) Working with DApps in other parachains

There are many successful applications in the existing chain, such as ChainX, Edgware and so on. Bandot will connect to these projects based on their interaction capabilities, allowing more assets to interact and gain transaction weights.

## 9. Roadmap

