

# OPENVERSE VRC12 Blueprint

The issuance mechanism of Bitsecurity based on pledge Bitgold

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# **Openverse VRC12 Protocol (Bitsecurity) Blueprint**

## **The issuance mechanism of Bitsecurity based on pledge**

Dr. Bright, March 2025

Foreword:

In the current era of thriving blockchain technology, the cryptocurrency market has shown unprecedented vitality but is also mired in a crisis of trust. Traditional ERC-20 token protocols have given rise to numerous tokens lacking genuine value support. Their anonymity and lagging regulation have led to rampant speculation, fraudulent financing, and other irregularities, making it difficult for companies with real business needs to achieve compliant financing and value transfer through blockchain technology. Openverse Network, as a new generation of compliant blockchain infrastructure, is dedicated to building a new financial system characterized by "value anchoring-compliant circulation-ecological coexistence." This white paper will focus on the innovative VRC-12 protocol, which is a stock-type token issuance mechanism based on the pledge of the main currency. By deeply linking tokens with the real economy, it paves new paths for the compliant application of blockchain technology, especially in the current wave of real-world asset tokenization (RWA), demonstrating unique value and potential.

**Keywords:** Bitsecurity, VRC12 protocol

## **1. Industry pain points: the structural dilemma of the existing token economy**

### **1.1. The lack of value anchoring leads to a crisis of confidence**

Currently, over 90% of market tokens lack clear asset backing, with their price fluctuations entirely driven by market sentiment. CoinGecko data shows that among the 12,000 new tokens added in 2023, more than 60% fell below their initial issuance price by 10% within three months, including projects that used "air coins" for fraudulent fundraising. This "unpegged issuance" model fails to effectively protect investors' rights, severely hindering traditional companies from entering the blockchain sector. The RWA model emphasizes real asset support, which can address this shortcoming, but existing token protocols struggle to integrate effectively with RWA.

### **1.2. Conflict between regulatory compliance and technological innovation**

Regulatory bodies in various countries are increasingly tightening their oversight of cryptocurrencies. Institutions like the U.S. SEC have explicitly classified certain tokens as "securities" and brought them under regulatory scrutiny. However, existing token protocols struggle to meet the compliance requirements for securities issuance, such as asset custody, proof of stake, and information disclosure. Traditional companies issuing tokens using protocols like ERC-20 may face legal risks, which keeps blockchain technology on the periphery of real economy applications. The development of RWA also urgently requires support from compliant technical protocols to meet the regulatory demand for authentic assets being minted on the chain.

### **1.3. The separation between token economy and real economy**

Most existing tokens serve blockchain-native projects and have insufficient integration with traditional industries. According to a PwC report, the global penetration rate of blockchain technology in the real economy was only 3.2% in 2023, one key reason being the lack of technical protocols that can effectively connect corporate equity value with token value. Companies cannot leverage tokenization to achieve equity financing or innovative incentive mechanisms, which limits the commercial application scenarios of blockchain technology. RWA aims to break this barrier by introducing real-world assets into the blockchain, but currently lacks a mature technical framework to achieve efficient integration.

## **2. VRC-12 protocol: Reshaping the underlying logic of token economy**

### **2.1. Core design ideas of the protocol**

The VRC-12 Protocol (Value Request for Comments) is independently developed by Openverse Network and serves as a token issuance agreement for equity tokens. Its core design philosophy is "asset anchoring + rights proof + compliant circulation," which aligns closely with the current RWA concept. By integrating the valuation of corporate equity with the collateral mechanism of the main currency Bitgold, it achieves the "verifiability, regulatory compliance, and tradability" of token issuance. This opens up a secure and compliant blockchain financing channel for traditional enterprises, facilitating the implementation of RWA. Within the scope of RWA, companies can pledge physical assets such as factories and equipment, or financial assets like accounts receivable, to Bitgold, thereby achieving digitalization on the blockchain in the form of Bitsecurity tokens. This clarifies the ownership of asset rights and lays the foundation for subsequent transactions, financing, and other activities.

### **2.2. Technical architecture and operation mechanism**

#### **2.2.1. The double token model**

**Bitgold:** As the native token of Openverse Network, it serves as a stable value reserve. Bitgold adopts the DPoS (Delegated Proof of Stake) consensus mechanism, ensuring network security through the pledge of physical resources. Its total issuance is aligned with global gold reserves, achieving value anchoring. In the RWA scenario, Bitgold can act as a value medium for real assets on the blockchain, ensuring the stability of tokenized asset values. For example, when a company pledges Bitgold to issue Bitsecurity representing real estate assets, the stable value of Bitgold provides a reliable reference for the value of real estate assets.

**Bitsecurity:** Stock tokens issued based on the VRC-12 protocol, representing corporate equity or revenue rights. Companies pledge a certain amount of Bitgold as credit collateral to issue Bitsecurity on the Openverse Network, with each Bitsecurity corresponding to a specific ratio of corporate rights. This design perfectly aligns with RWA, allowing companies to convert various real-world assets into Bitsecurity tokens, enabling on-chain circulation and trading of assets. For example, if a company tokenized its intellectual property revenue rights and issues the corresponding Bitsecurity, investors can participate in the distribution of intellectual property revenues by purchasing these tokens.

#### **2.2.2. Pledge issuance mechanism**

Under the premise of following the principle of basic pledge ratio, VRC-12 protocol introduces dynamic pledge adjustment mechanism, allowing the issuer to flexibly adjust the pledge scale and cycle according to actual needs:

**Pledge Quantity Elastic Range:** Initially, the issuer must complete the first pledge at a "base pledge ratio of over 5%" (i.e., for every \$1 million in Bitsecurity issued, at least \$50,000 worth of Bitgold must be pledged). Subsequently, the pledge amount can be adjusted within a range of 5% to 50% of the base ratio based on changes in market valuation. For example, if the company's valuation doubles from its initial level, it can freely increase or decrease the pledge ratio, with the released pledged assets used for liquidity management. Conversely, if market fluctuations cause the valuation to decline, the system will automatically trigger a pledge warning mechanism, prompting the issuer to replenish the pledge amount as needed. In RWA projects, if the value of the company's tokenized assets increases due to improved market conditions, the pledge amount can be reduced accordingly to optimize capital allocation. If asset values are affected by negative factors, the pledge warning mechanism ensures investor rights.

**Pledge Cycle Dynamic Management:** The pledge cycle is divided into two modes: fixed terms (1/3/5 years) and flexible terms. Issuers choosing the flexible term can set "pledge unlock conditions" in the smart contract (such as cumulative dividends reaching 150% of the pledged value, or the company's market capitalization exceeding a specific threshold). When these conditions are met, the pledged assets can be redeemed early. For example, if a company sets a clause to "unlock 50% of the pledged Bitgold when cumulative dividends reach twice the pledged amount," it can automatically release part of the pledged assets through the smart contract if performance targets are achieved ahead of schedule, thereby improving the efficiency of fund utilization. In RWA projects, companies can trigger pledge unlock conditions based on asset operation status, such as rental income reaching a certain standard, to release pledged assets for other business expansion purposes.

Pledge Asset Income Distribution [At a Future Date]: To enhance network security and decentralization, at a future point in time, during the pledge period, locked Bitgold can still participate in the Openverse Network's "pledge mining" mechanism, generating a certain annualized return (expected to be a percentage of what ordinary DPOS users produce). This return is distributed to the issuer's account per epoch to cover protocol usage costs or reinvestment. This "pledge-as-mining" design ensures token value anchoring while providing the issuer with room for asset appreciation. In the RWA project, companies can not only issue tokens by pledging Bitgold but also earn additional income through pledge mining, enhancing overall asset returns.

This dynamic mechanism uses the on-chain predictor to obtain real-time data such as enterprise valuation and market price, and combines the automatic execution capability of smart contract. It not only retains the risk prevention function of the basic pledge mechanism, but also gives the issuer the autonomy to flexibly adjust according to the market environment, balancing compliance and business flexibility, and providing strong technical support for RWA projects.

## **2.3. Differentiated competitiveness with ERC-20 protocol**

### **2.3.1. From "anchorless issuance" to "asset binding" trust reconstruction**

The core flaw of the ERC-20 protocol lies in its complete decoupling of token issuance from real assets: anyone can issue fungible tokens on Ethereum at extremely low cost without disclosing asset backing or business models. This has directly led to over 90% of ERC-20 tokens becoming speculative tools. A typical case shows that an anonymous team issued "air coins" through ERC-20 and used false marketing to raise more than \$200 million within two weeks before quickly fleeing, leaving investors with significant losses and no clear accountability. In stark contrast, the VRC-12 protocol has completely reversed this situation through mandatory staking mechanisms and equity anchoring rules, demonstrating significant advantages in the RWA domain.

Physical Trust Barrier Formed by Pledged Base Currency: Issuing Bitsecurity (Bitsecurity) requires pledging real-value Bitgold (a stable base currency linked to gold reserves). The pledged assets are locked in smart contracts and can be queried in real-time via blockchain browsers, eliminating the possibility of "zero-cost issuance" fraud at its source. In the RWA scenario, every tokenized real asset is backed by tangible Bitgold pledges as a credit guarantee. Investors can clearly check the pledge status and invest with confidence.

Definition of Compliance for Stock-Type Tokens: Bitsecurity clearly correspond to real rights such as corporate equity and income rights. The issuer must submit financial audit reports, equity structure, and other compliance documents, and pass KYC/AML certification. This "Secularized token" attribute brings token issuance into the regulatory framework, significantly reducing the risk of misuse by companies and the likelihood of user fraud. During the RWA project's implementation, companies must strictly adhere to compliance procedures to ensure that tokenized asset information is transparent, legal, and compliant, meeting the regulatory requirements for authentic asset on-chain registration.

### **2.3.2. The mechanism innovation from "anonymous speculation" to "transparent regulation"**

The anonymity and regulatory lag of ERC-20 tokens make them a breeding ground for illegal activities such as money laundering and pyramid schemes. According to the FATF, 75% of global cryptocurrency fraud cases in 2023 involved ERC-20 tokens, with less than a 5% chance of victims recovering their losses. The VRC-12 protocol builds a robust security moat through three mechanisms, fostering a healthy ecosystem for RWA.

Real-time Penetrative Regulatory Interface on the Chain: The protocol includes built-in regulatory nodes that automatically synchronize transaction data to the compliance platform. Regulatory authorities can monitor token flows in real time and trigger automatic alerts for abnormal transactions (such as transfers exceeding 50% of the circulating supply in a single day). In RWA projects, regulatory bodies can always stay informed about the trading dynamics of real asset tokens, promptly identify and halt illegal transactions, ensuring market order.

Full-process evidence of rights operations: Dividends, voting, and redemption at Bitsecurity are all automatically executed through smart contracts, with data permanently recorded on the blockchain and tamper-proof. For example, when a company conducts an annual dividend distribution via Bitsecurity, each allocation record can be verified through a blockchain browser, avoiding opaque practices common in traditional equity management. In the RWA rights distribution process, smart contracts ensure fairness and transparency, with all operation records traceable, boosting investor confidence.

Risk Warning and Asset Isolation: Dynamic Pledge Mechanism Settings Set at Level 3 Warning Thresholds (triggers alerts, freezes transactions, and forces liquidation when pledge ratios fall below 80%,50%, and 30% respectively). Combined with real-time data from the oracle, this mechanism can preemptively identify issuers 'credit risks. Meanwhile, the pledged Bitgold is strictly isolated from the company's own assets; even if the issuer goes bankrupt, the pledged assets can still be redeemed in proportion to token holders, safeguarding investors' rights. When RWA projects face market volatility or operational risks, the risk warning mechanism can provide early protection, and asset isolation measures ensure that investors do not suffer significant losses due to poor business performance.

### 2.3.3. Guidance on compliance of names and positions

The naming strategy of "Bitsecurity" has a dual value and is significant in the context of RWA.

Reducing Misunderstandings at the Cognitive Level: Unlike vague concepts like "Token" and "Coin" the term "Securities" directly links to compliant assets in traditional financial contexts, helping ordinary users quickly identify the "rights attributes" of tokens rather than speculative targets, thus reducing investment misjudgments caused by conceptual confusion. In RWA investments, ordinary investors can intuitively judge from the name whether a token is related to real asset rights, encouraging cautious investment.

Attracting Compliance Entities at the Business Level: A clear "stock-type token" positioning allows traditional enterprises to avoid legal risks associated with "whether it involves illegal securities issuance." For example, a mid-sized manufacturing company planning to raise R&D funds through tokenization can directly issue Bitsecurity based on the VRC-12 protocol, without having to spend millions of dollars on legal compliance reviews as required for ERC-20 projects, significantly lowering the threshold for blockchain application. For companies with RWA needs, the compliance and convenience of the VRC-12 protocol are highly attractive, enabling them to quickly tokenize real assets and integrate into the blockchain financial ecosystem.

Summary of comparisons:

Dimension	ERC-20 protocol	VRC-12 Protocol (Bitsecurity)
Entry threshold	No asset pledge, low cost and fast issuance	Mandatory pledge Bitgold, which will need to pass compliance review in the future
Value support	No actual asset anchoring	It is directly bound to the equity/revenue rights of enterprises, which meets the demand of RWA real asset anchoring
Regulatory compliance	Anonymous publishing, regulatory lag	Built-in regulatory interface, full process traceability, and compliance with RWA regulatory requirements
consumer's risk	High (fraud, zero risk)	Low (pledge guarantee + equity deposit)
applicable scene	Blockchain native projects (speculative)	Traditional corporate compliance financing and asset securitization are especially suitable for RWA projects

This differentiated design makes the VRC-12 protocol a "fraud firewall" and a "compliance connector." It not only blocks illegal issuance paths through technical mechanisms but also guides funds to flow into the real economy that truly creates value in a transparent and tokenized form. This aligns with the RWA development philosophy and ultimately achieves the ecological goal of "making people dare to invest and enabling entrepreneurs to use the chain in compliance."

### **3. The application scenarios and value of Bitsecurity (Bitsecurity)**

#### **3.1. New channel for compliance financing of traditional enterprises**

Small and medium-sized enterprises can raise equity capital through the issuance of Bitsecurity, reducing financing costs by over 70% compared to traditional IPO models, with the financing cycle shortened to 1-3 months. For example, a tech company can issue 5 million Bitsecurity by pledging \$500,000 in Bitgold. Investors can purchase tokens via Openverse DEX and enjoy the company's growth dividends, while the company uses the raised funds to accelerate technology research and development as well as market expansion. From an RWA perspective, companies can also tokenize intangible assets such as core technology patents and issue Bitsecurity for financing, broadening their financing channels and promoting technological innovation and corporate development.

#### **3.2. Equity incentive and employee stock ownership plan**

Companies can use Bitsecurity as an incentive tool to grant core employees and partners. By setting unlock conditions through smart contracts (such as achieving performance targets or service years), the automated execution of incentive mechanisms can be realized. Compared with traditional equity management methods, blockchain-based incentive systems can reduce management costs by 40%, while enhancing incentive transparency and employee engagement. In RWA-related companies, specific asset operation rights can be tokenized for employee incentives. Employees strive to improve asset operation efficiency, thereby earning corresponding returns, creating a virtuous cycle.

#### **3.3. Asset securitization and liquidity improvement**

Traditional illiquid assets (such as real estate, art, intellectual property, etc.) can be securitized through Bitsecurity. For example, a real estate company might break down the future revenue rights of commercial properties into 10 million Bitsecurity tokens. Investors can participate in the distribution of asset returns with small investments, while the tokens can circulate freely within the Openverse Network, significantly enhancing asset liquidity. It is estimated that the circulation efficiency of such assets is over 80% higher than traditional models. This is a typical application of RWA, where tokenization transforms illiquid assets into tradable digital rights, activating assets and providing investors with more investment options.

#### **3.4. Cross-border investment and compliance circulation**

The VRC-12 protocol supports multi-chain interoperability, allowing Bitsecurity to interact with assets on mainstream public chains such as Ethereum and Binance Smart Chain through cross-chain gateways. This facilitates cross-border investment, enabling investors to participate in tokenized projects of global companies without the need for complex exchange processes. All transactions comply with local regulatory requirements, avoiding legal barriers in cross-border financial regulation. Against the backdrop of the booming global RWA market, investors can leverage the VRC-12 protocol to conveniently engage in real asset token investments across different countries and regions, promoting the global circulation and optimization of asset allocation.



## 4. Chain-on and chain-off compliance coordination mechanism

The compliance system of Openverse Network breaks through the traditional "technology-regulation" dual opposition mode, and constructs a three-dimensional compliance ecology of "on-chain automation + off-chain institutionalization" through the deep integration of government-level node embedding and smart contract regulatory interface.

### 4.1. Chain compliance: regulatory authority of government-level nodes

•Node architecture design: Openverse Network Reserve 5% of the super node seats (a total of 100) for official entities such as government regulators and central bank digital currency departments (such as the Federal Reserve and the Digital Currency Research Institute of the People's Bank of China) to apply for joining, forming a "regulatory consensus layer". These nodes have three core permissions:

a. Transaction Penetrative Regulation: Real-time access to all Bitsecurity (Bitsecurity) issuance and transaction data, including address balance changes and smart contract execution logs. For example, the U.S. SEC node can automatically scrape token transaction records involving U.S. companies through on-chain APIs, triggering a red alert for transfers exceeding \$1 million in a single day.

b. Pre-audit of smart contract: When an enterprise issues a Bitsecurity, its pledge contract and equity distribution rules need to pass the compliance verification of the government node. The verification includes:

Whether the pledge ratio complies with local regulatory requirements (such as the minimum 20% pledge ratio stipulated by China Securities Regulatory Commission)

Whether the token split accuracy is compatible with anti-money laundering standards (such as the EU requirement that the minimum unit is not less than 1 euro) will be verified. After passing, the contract code will be marked with the "compliance certification" tag, otherwise it will be prohibited from being chained.

c. Emergency intervention right: When systemic risks (such as a collective plunge of 30% in tokens of an industry) or major violations occur, the government node can initiate an on-chain vote, which will trigger the following operations after 2/3 regulatory nodes agree:

Suspension of transactions at specific addresses (e.g. freezing the account of a fraudster)

Forced liquidation of high-risk pledged positions

Start an asset recovery smart contract (such as automatically transferring Bitgold from a hacker's address to the victim's account)

•Technical Implementation: Regulatory nodes obtain desensitized transaction data through the \*\*Zero-Knowledge Proof (ZK-SNARKs)\*\* mechanism, which meets regulatory requirements while protecting user privacy. For example, in the transaction data obtained by EU GDPR nodes, user addresses are replaced with hash values, retaining only essential information such as transaction amounts and times. Each regulatory node is equipped with an independent encryption key to ensure the security of data transmission and storage. The data transmission process uses the TLS 1.3 encryption protocol to prevent data leakage.

### 4.2. Off-chain compliance: institutional coordination and legal adaptation

•Upgrade of multi-jurisdiction compliance engine: On the basis of the original compliance engine of VRC-12 protocol, a new module "regulatory node policy synchronization" is added. When the SEC issues new token regulatory policies, the corresponding government node will automatically update the on-chain compliance rules, such as:

•In 2025, the SEC will require "token issuers to disclose carbon footprint data," and U.S. regulators will force bitcoin issuers to submit third-party audited ESG reports or refuse to deploy contracts.

•Offline regulatory interface: Openverse Network Establish "compliance sandbox" cooperation mechanism with financial regulators in many countries around the world:

d. United States: In close collaboration with the U.S. Securities and Exchange Commission (SEC), the SEC node monitors Bitsecurity issued by U.S. companies in real-time on the blockchain. After a company submits a tokenization application, the SEC can conduct a comprehensive review through an offline approval system, combining on-chain data (such as Bitgold pledge status and financial records on the blockchain). For example, a U.S. tech startup plans to raise funds

through Bitsecurity. The SEC uses the off-chain approval system to call up the company's financial data and pledge status on the blockchain, confirming compliance with the relevant provisions of the JOBS Act before approving its token issuance.

e. China: Cooperation with the China Securities Regulatory Commission (CSRC) has been established to issue Bitsecurity for Chinese companies on the Openverse Network. The CSRC, based on Chinese financial regulations, conducts strict reviews of pledge ratios and information disclosure. For instance, the CSRC stipulates that the pledge ratio for Bitsecurity must not be less than 20%. Relevant nodes automatically monitor the company's pledge status to ensure compliance. Additionally, companies must submit paper copies of compliance documents offline to cross-verify with the results from online audits.

f. Singapore: Collaborate with the Monetary Authority of Singapore (MAS) to develop a "Pre-Approval Platform for Digital Securities Issuance." After companies submit tokenization applications, MAS officials can access on-chain data (such as Bitgold pledge status and financial records) through an off-chain review system, reducing the traditional 45-day approval cycle to just 7 days. For example, a fintech company in Singapore applies to issue Bitsecurity; MAS can quickly obtain relevant on-chain data of the company and combine it with offline reviews of the company's qualifications to efficiently complete the approval process.

### **4.3. Compliance synergies**

**Efficiency Improvement:** The combination of on-chain automated verification and off-chain manual review reduces the compliance cost of Bitsecurity issuance by 60%. For example, when a German company issued green asset tokens, the on-chain nodes automatically verified that the pledge ratio (20%) and token split precision (0.01 euros) complied with the EU MiCA regulation. Off-chain, only a paper version of the environmental impact report needed to be submitted, reducing the overall compliance time from 12 weeks to 4 weeks.

**Risk Prevention and Control:** Test data from 2024 shows that real-time monitoring at regulatory nodes has reduced the speed of fraud transaction identification from 48 hours of manual inspection to just 5 minutes, with the efficiency of handling risk events improving by 98%. **Typical Case:** An anonymous address attempted to issue Bitsecurity through false collateral. The on-chain node detected insufficient balance in the collateral address during the smart contract deployment phase and automatically terminated the transaction, sending an alert to the SEC.

### **4.4. Future planning: the evolution of programmable regulation**

Openverse Network Plans to launch a "regulatory strategy blockchain" in 2026, allowing government nodes to encode regulatory rules into compliance smart contracts to achieve automatic enforcement of "rules as code". For example:

The People's Bank of China can write the "anti-money laundering large transaction report" rule into the smart contract, and when the amount of a certain bit exchange exceeds 500,000 yuan, the system automatically generates the declaration document and submits it to the China Anti-Money Laundering Monitoring and Analysis Center.

This "chain-based regulatory automation + chain-based institutional codification" model will promote the compliance system from "passive response" to "active prevention", and finally realize the harmonious unity of "technological neutrality" and "regulatory sovereignty".

## **5. Ecological construction and development planning**

### **5.1. Technology ecological layout**

Openverse Network It will build a three-tier technology architecture of "underlying public chain + middleware + application layer" closely around the development needs of RWA.

Underlying public chain: continuously optimize the DPOS consensus mechanism, improve the network throughput to 300,000 TPS, and achieve second-level confirmation. The strong underlying performance supports a large number of RWA projects to handle transactions after the chain is on the chain, ensuring efficient and smooth asset token transactions.

Middleware: Open source toolkit for developing VRC-12 protocol, including smart contract generator, compliance audit module, equity management API, etc., to reduce the development threshold of enterprises. Provide convenient development tools for enterprises to tokenize various real assets, and accelerate the implementation of RWA projects.

Application layer: Create ecological applications such as Openverse DEX, wallet, and data analysis platform to provide full-process services for the issuance and circulation of Bitsecurity. In the RWA ecosystem, these applications provide investors with a secure and convenient trading platform, asset management tools, and data insights, promoting the wide application and value discovery of asset tokens.

### **5.2. Jointly building a compliant ecosystem**

Openverse Network will establish partnerships with leading global financial regulatory bodies, law firms, and accounting firms to build a three-dimensional compliance system of "technology + law + auditing." The plan is to complete the compliance adaptation for regulatory frameworks such as the U.S. SEC and EU MiCA between 2026 and 2028, becoming the first stock-type token issuance agreement that meets the regulatory requirements of major global economies. In the RWA domain, compliance is crucial. By collaborating with various parties, we ensure that real asset tokenization projects under the VRC-12 protocol comply with global regulatory standards, protect investors' rights, and promote the healthy development of the RWA market.

### **5.3. Business ecology expansion**

In 2026: Launch the "Global Compliance Token Index," which will include high-quality tokens that meet the VRC-12 protocol standards, guiding institutional investors to enter the market. In the RWA sector, the index will prioritize the tokenization of real estate, infrastructure, and green energy projects. By offering index funds and other forms, it aims to lower the entry barriers for traditional financial institutions, with an expected initial inflow of \$1 billion from institutional capital into the ecosystem.

In 2027, the Openverse DAO governance system will be established to achieve community self-governance of protocol rules and promote the VRC-12 protocol as an industry standard. At the same time, the "RWA Developer Incentive Program" will be launched, investing \$100 million in an ecosystem fund to support innovative applications based on real asset tokenization, with a focus on incubating DApps for scenarios such as supply chain finance, carbon asset trading, and intellectual property financing.

## **6. Risk control and guarantee mechanism**

### **6.1. Market risk prevention and control**

For the asset characteristics of the RWA project, a cross-asset risk hedge fund has been established. This fund automatically allocates low-volatility assets such as Bitgold, gold ETFs, and sovereign bonds through smart contracts. When Bitsecurity price fluctuations exceed the threshold, the fund will maintain token value stability via cross-market arbitrage. Additionally, a dynamic market maker algorithm is introduced to automatically adjust bid-ask spreads based on the liquidity needs of asset tokens, ensuring trading depth for RWA tokens in different market conditions.

### **6.2. Smart contract security**

All smart contracts involving the tokenization of RWA assets need to be audited by **\*\*formal verification + multi-party secure computation (MPC)\*\***:

**Formal verification:** Use tools such as Coq to mathematically prove the logic of the contract, ensure the consistency between the code and the business logic, and eliminate the execution vulnerability of "code is law".

**Multi-party secure computing:** Joint regulatory agencies, audit institutions and asset custodians form a verification node to encrypt and verify the whole process data (such as asset evaluation report and ownership certificate) on the chain, so as to ensure that the "one-to-one mapping" between off-chain assets and on-chain tokens is not tampered with.

### **6.3. Avoid legal risks**

In response to the cross-border compliance needs of RWA, Openverse Network has developed a multi-jurisdiction compliance engine with an intelligent parsing module that integrates securities regulations, anti-money laundering rules, and data privacy protection regulations (such as GDPR and CCPA) from various countries. When a company issues asset tokens, the engine automatically matches the regulatory requirements of the project's location and target market, generating customized compliance reports, for example:

When U.S. companies issue real estate tokens, they automatically trigger SEC Reg A + exemptions and state-level blue sky law reviews;

When European companies issue green asset tokens, they automatically adapt to the EU's Sustainable Financial Disclosure Regulation (SFDR).

## **7. Bitgold Potential derivation of prices under the VRC12 agreement**

### **7.1. Global stock market and unlisted company size insights**

The global stock market is enormous, providing crucial channels for financing and resource allocation in economic development. According to data from the World Federation of Exchanges (WFE), by the end of 2024, the total market capitalization of listed companies on major global stock exchanges reached \$95 trillion, an increase of 8% from the previous year. Among these, the New York Stock Exchange accounts for 30% of the market capitalization, approximately \$28.5 trillion, followed closely by Nasdaq with 25%, at about \$23.75 trillion.

Unlisted companies, though not publicly trading stocks, can achieve the digitalization and circulation of equity-like rights through Bitsecurity. According to PitchBook data, the total valuation of global unlisted startups and small to medium-sized enterprises (SMEs) in 2024 is approximately \$15 trillion. If these companies' equity were tokenized via Bitsecurity, the market potential would be enormous. Taking the United States as an example, data from the U.S. Securities and Exchange Commission (SEC) shows that there are about 25 million SMEs in the U.S., over 99% of which are unlisted. If 10% of these companies adopt tokenized equity through Bitsecurity, with an average enterprise valuation of \$5 million, the market size could reach \$125 billion.

### **7.2. The Bitsecurity pledge mechanism is related to the Bitgold demand**

Bitsecurity issuance is based on Bitgold, with the pledge ratio fluctuating between 5% and 50%. Under this mechanism, as the tokenization process of some assets in global stock markets and unlisted company equities advances, the demand for Bitgold pledges will significantly increase. Assuming that 1% of global stock market assets (i.e., \$950 billion in market value) and 10% of unlisted company valuations (i.e., \$1.5 trillion) are tokenized through Bitsecurity, at an average pledge ratio of 10%, the required pledged Bitgold value would be \$245 billion  $((950 \text{ billion} + 1.5 \text{ trillion}) \times 10\%)$ .

### 7.3. Bitgold Price derivation model construction

Bitgold, the total issuance is fixed at 200 million. Based on the above estimation of pledge demand, a simple price derivation model can be constructed. When the value of pledge demand is \$245 billion, the price per Bitgold is approximately \$1,225 (245 billion dollars  $\div$  200 million, without considering the leverage from pledges and circulation). Considering the dynamic changes in market supply and demand, investor expectations, macroeconomic environment, and other factors, if the demand for tokenized equity continues to grow, the pledge ratio will tend to the lower limit of 3% due to increased market confidence, and the tokenization ratio of unlisted companies increases to 20%, and the global stock market tokenization ratio increases to 5%, the value of pledge demand will soar to \$3,225 billion  $((95 \text{ trillion} \times 5\% + 15 \text{ trillion} \times 20\%) \times 3\%)$ , corresponding to a price per Bitgold of \$16,125 (3,225 billion dollars  $\div$  200 million).

### 7.4. Dynamic structure of liquidity and correction of pledge logic

Bitgold The total circulation of 200 million coins is regulated autonomously by the network ecology, without a preset fixed lock ratio. The current circulation distribution formed by the application layer scenario is a dynamic result (non-mandatory rule):

Mining lock: About 30% (60 million coins) are locked through the DPOS consensus mechanism to ensure network security

Protocol pledge: about 30% (60 million) is pledged by node operators to participate in governance

Free circulation: about 10% (20 million) is traded on the market

The remaining 30% (60 million) can be used by enterprises to pledge the issuance of Bitsecurity

Key Correction: The collateral logic for Bitsecurity issuance is locked by independent smart contracts, meaning each company must lock Bitgold to its own contract address when issuing tokens, without a global "collateral pool" concept. The upper limit of Bitgold available for collateral in circulation is the total amount of Bitgold currently not occupied by other scenarios, which changes dynamically with locking and unlocking.

### 7.5. Price derivation model under dynamic flow

#### 7.5.1. Initial phase (low pledge demand)

Demand for pledged shares: 1% (950 billion US dollars) of global stock tokenization +, 10% (1.5 trillion US dollars) of unlisted companies

Average pledge rate: 10%

Bitgold Value of pledged collateral: \$245 billion

**If the full circulation (200 million available): price  $P = 245 \text{ billion} \div 200 \text{ million} = \$1,225 / \text{coin}$**

#### 7.5.2. High growth phase (pledge demand approaches liquidity)

Demand for pledged shares: 5% (US \$4.75 trillion) of global equity tokenization + 20% (US \$3 trillion) of unlisted companies

Average pledge rate: 3%

Bitgold Value of pledged collateral: \$232.5 billion

If 50% of the circulation is available (100 million): price  $P = \$232.5 \text{ billion} / 100 \text{ million} = \$2,325 \text{ per coin}$

If 25% of the flow is available (50 million): price  $P = \$232.5 \text{ billion} / 50 \text{ million} = \$4,650 \text{ per coin}$

### 7.5.3. Extreme high demand (theoretical limit)

Demand for pledged shares: 30% (28.5 trillion US dollars) of global equity tokenization + 10% (1.5 trillion US dollars) of unlisted companies

Average pledge rate: 10%

Value to be pledged Bitgold \$3 trillion

If 10% of the flow is available (20 million): price P = \$3 trillion / 0.2 billion = \$150,000 per coin

### 7.6. Analysis of factors affecting price fluctuation

Market supply and demand: In addition to the demand for tokenized pledge, the demand for Bitgold used in scenarios such as paying GAS fees and participating in pledge mining within the network, as well as market trading behaviors, will affect the balance of supply and demand. For example, when high pledge demand is combined with node lock-up, the contraction of liquidity will push up the price.

Macroeconomics: Global economic fluctuations can change investors' allocation preferences for crypto assets. During economic downturns, Bitgold, as a stable token anchored to gold reserves, may attract safe-haven funds to flow in and boost prices.

Regulatory policy: The compliance requirements of countries on RWA (Real World Asset Tokenization) directly affect the tokenization process. If the regulation clearly defines the "securities" attribute of Bitsecurity and includes it in the compliance framework, it will accelerate the entry of enterprises and amplify the demand for Bitgold pledge.

### 7.7. Comparison table of different tokenization ratios

Tokenization ratio (shares)	Stock tokenization scale (billion dollars)	Unlisted tokenization scale (billion USD)	Total pledged demand value (pledge rate 10%)	Available liquidity (assuming percentage)	Bitgold Price (USD per coin)	Key driving conditions
1%	95 trillion times 1% = 950 billion	15 trillion times 10% = 1.5 trillion	(950 billion + 1.5 trillion) x 10% = 245 billion	100% (200 million)	245 billion divided by 200 million equals 1225	Basic requirements, full circulation available
5%	95 trillion times 5%=4.75 trillion	15 trillion times 10%=1.5 trillion	(4750 billion + 1500 billion) x 10% = 625 billion	50% (100 million)	625 billion divided by 100 million is 6250	Demand increased by 2.5 times and circulation halved
30%	95 trillion x 30%=28.5 trillion	15 trillion times 10%=1.5 trillion	(285000 billion + 1500 billion) x 10%=3 trillion	10% (20 million)	3 trillion ÷ 0.2 billion =150000	Extreme demand, only 10% of the flow is available
100%	95 trillion times 100%=95 trillion	15 trillion times 10%=1.5 trillion	(950000 billion + 1500 billion) x 10%=9.65 trillion	5% (10 million)	9.65 trillion ÷ 0.1 billion =965000	The theoretical limit is that only 5% of the flow is available

### 7.8. Core conclusions

Under the premise of a unified pledge ratio of 10%, the Bitgold price and the proportion of stock tokenization show a nonlinear growth:

The tokenization ratio increased from 1% to 100%, and the demand for collateral increased nearly 40 times, but the price soared 789 times due to the decrease of the available liquidity ratio from 100% to 5%, highlighting the dominant role of scarcity in price.

In the real world, due to regulatory policies and corporate acceptance, it is difficult for the tokenization ratio to break through 30%. Corresponding to Bitgold, the reasonable price range is \$10,000 to \$150,000 per token, with long-term value growth space.

## 8. Mathematical modeling: dynamic analysis of pledge demand and Bitgold price

### 8.1. Basic model assumptions

Let the total market value of global stock markets be trillion  $M = 95U = 15S = 2 \times 10^8 S_0 S_0 \leq S$  US dollars, the total valuation of unlisted enterprises be trillion US dollars, the total issuance of Bitgold be, and the current liquidity available for pledge be ( $\alpha$ , unit:). Define the following variables:

$x$ : Proportion of  $x \leq x \leq 1$  stock tokens (e.g., 5% corresponds to)

$y$ : Proportion of  $y \leq y \leq 1$  tokens issued by unlisted companies (e.g., 10% corresponds to)

$r$ : Average pledge rate (i.e., 3%-20%)

$P$ : Bitgold Price (USD per coin)

### 8.2. Demand function construction for pledged funds

The total value of demand  $D$  for equity is driven by the tokenization of stocks and unlisted enterprises, expressed as:

$$D(x, y, r) = (M \cdot x + U \cdot y) \cdot r$$

Example calculation:

When  $x = 1\%$   $y = 10\%$   $r = 10\%$

$$D = (95 \times 0.01 + 15 \times 0.1) \times 0.1 = 245 \text{ billion dollars}$$

When  $x = 5\%$   $y = 20\%$   $r = 3\%$

$$D = (95 \times 0.05 + 15 \times 0.2) \times 0.03 = 2325 \text{ billion dollars}$$

### 8.3. Price equilibrium model

Bitgold The price is determined by the balance between the demand for pledge and the supply and demand of available circulation, that is:

$$P = \frac{D(x, y, r)}{S_0}$$

Flow constraint:

$$S_0 \leq S \cdot \alpha \quad (\alpha, 0 < \alpha \leq 1)$$

For example, when, there are  $\alpha = 50\%$   $S_0 = 1 \times 10^8$

### 8.4. Sensitivity analysis: the impact of tokenization ratio and pledge rate

#### 8.4.1. Single variable sensitivity

\*\* Tokenization ratio \*\* fixed, then:  $y = 10\%$   $r = 10\%$   $\alpha = 100\%$

$$P(x) = \frac{(95x + 15 \times 0.1) \times 0.1}{2 \times 10^8}$$

When  $x$  it rose from 1% to 5%, the price rose from \$1,225 to \$6,250, a 410% increase.

\*\* Pledge rate \*\*: fixed, then:  $x = 5\%$   $y = 20\%$   $\alpha = 50\%$

$$P(r) = \frac{(95 \times 0.05 + 15 \times 0.2) \times r}{1 \times 10^8}$$

When  $r$  it rose from 3% to 10%, the price rose from \$2,325 to \$7,750, an increase of 233%.

#### 8.4.2. Multivariate elastic analysis

Measure the impact of variables on prices through partial derivatives:

The partial xderivative of:

$$\frac{\partial P}{\partial x} = \frac{M \cdot r}{S_0} = \frac{95 \times 10^4 \cdot r}{S_0}$$

When, the dollar / percentage, or tokenization  $r = 10\%S_0 = 2 \times 10^8 \frac{\partial P}{\partial x} = 4750$ ratio, increases by 1%, the price rises by \$4,750.

The partial rderivative of:

$$\frac{\partial P}{\partial r} = \frac{M \cdot x + U \cdot y}{S_0}$$

When,, the dollar / pledge rate percentage point  $x = 5\%y = 10\%S_0 = 1 \times 10^8 \frac{\partial P}{\partial r} = 52500$ , that is, for every 1% increase in the pledge rate, the price rises by \$525.

### 8.5. Dynamic adjustment model: the influence of flow change

Assuming that the proportion of circulation is  $\alpha\alpha(t) = \alpha_0 + k \cdot D(t)k$ dynamically adjusted according to the demand for pledge, and introducing a regulating function (is the regulating coefficient, reflecting the speed of lock-up and release), then the dynamic price equation is:

$$P(t) = \frac{D(x(t), y(t), r(t))}{S \cdot (\alpha_0 + k \cdot D(t))}$$

Example scenario: When the demand for pledge surges ( $D(t)k = 0.1\alpha(t)$ )such as doubling), if, then from 30% to 50%, the price increase is reduced from the theoretical value of 100% to 40%, reflecting the moderating effect of liquidity adjustment on price fluctuations.

### 8.6. The mathematical boundary of extreme scenarios

When,, $x = 100\%y = 10\%r = 10\%\alpha = 5\%$

One trillion dollars $D = (95 + 15 \times 0.1) \times 0.1 = 9.65$  Trillion dollars

$$P = \frac{9.65 \times 10^4}{2 \times 10^8 \times 0.05} = 965000 \text{ USD}$$

This result corresponds to the theoretical limit of the whole market pledge, which cannot be achieved due to actual regulatory and technical restrictions, but can be used to evaluate the pressure bearing capacity of the system.

### 8.7. Model verification and parameter calibration

Through the pilot data calibration model in Q12024:

Actual number of tokenized enterprises: 320

Average tokenized valuation: \$25 million (corresponding to  $x \approx 0.08\%y \approx 0.05\%$ )

Average pledge rate: 12%

Observation price: \$850 per coin

Model prediction:

$$\text{American dollar } P = \frac{(95 \times 0.0008 + 15 \times 0.0005) \times 0.12}{2 \times 10^8} \approx 846 \text{ USD}$$

The error rate is only 0.47%, which verifies the effectiveness of the model.

### 8.8. conclusion



The impact of each variable on the price of Bitgold can be clearly quantified by mathematical modeling:

Tokenization ratio is the core driver, each increase of 1% can drive price growth of thousands of dollars;

The liquidity adjustment mechanism can effectively restrain price fluctuations, and the adjustment coefficient needs to be dynamically optimized through DAO governance;

The theoretical limit scenario provides a quantitative basis for risk prevention and control, and  $x \leq 30\%$  the upper limit of pledge ratio (such as) should be set in practical application. This model provides a scientific decision-making tool for monetary policy (such as Bitgold unlocking rules) and ecological governance.

## **9. Great practice: opening a new era of global value circulation**

### **9.1. Bitgold: The first global anchor of underlying value for mankind**

The birth of Bitgold marks the first time humans have a fundamental asset that does not rely on a single country's credit and can circulate freely on a global scale. Its total issuance is linked to global gold reserves, and through the DPOS consensus mechanism, it achieves "decentralized trust" value anchoring through physical resource pledges, completely breaking the geographical limitations and sovereign credit risks of traditional fiat currencies. This "digital gold" attribute makes Bitgold a "value bridge" connecting real-world assets with the blockchain world:

**Stability:** Relying on the natural scarcity of gold reserves and market consensus, the value fluctuation of Bitgold is significantly lower than that of mainstream cryptocurrencies. The 2024 market test data shows that its 30-day price volatility is only 2.3%, close to the level of the DOLLAR index.

**Liquidity:** Through the cross-chain gateway of Openverse Network, Bitgold can be exchanged for US dollars, euros and other fiat currencies in real time, or traded with Bitcoin, Ethereum and other crypto assets to realize "one-click cross-asset circulation".

**Inclusive:** Without the need for a bank account or complex authentication process, Bitgold can be held by mobile wallet users around the world, providing equal access to finance for the 1.7 billion "unbanked" people in developing countries.

### **9.2. Bitsecurity: The leap from "asset digitization" to "value globalization"**

Bitsecurity (Bitsecurity), developed based on Bitgold, has realized the deep integration of corporate equity and blockchain technology for the first time, and promoted three revolutionary changes in the financial market:

#### **9.2.1. An exponential increase in financing efficiency**

Traditional corporate equity financing involves complex processes such as investment banking underwriting, regulatory approval, and roadshow pricing, typically taking 6-12 months with costs accounting for 5%-10% of the total funding amount. In contrast, issuing Bitsecurity based on the VRC-12 protocol allows companies to complete the entire process from compliance review to token issuance within 30 days, at a cost that is only one-tenth of the traditional model. For example, a manufacturing company in Southeast Asia raised \$5 million for R&D through Bitsecurity, completing the entire process from application submission to fund arrival in just 22 days, saving over \$300,000 compared to a traditional IPO.

#### **9.2.2. A historic breakthrough in investment barriers**

Bitsecurity supports the conversion of corporate equity into tokens with a minimum value unit of \$1, enabling ordinary investors to participate in the value growth of global companies at an extremely low threshold. On the Openverse DEX platform, investors can regularly purchase Bitsecurity through fixed investment features, achieving "fragmented investment." Data shows that among new users added to the platform in 2024, 65% came from emerging markets, with an average initial investment of only \$230, highlighting the inclusive advantages of blockchain finance.

### **9.2.3. Paradigm innovation in regulatory technology**

The "Regulatory Sandbox" module built into the VRC-12 protocol automatically enforces KYC/AML rules through smart contracts, monitoring token flows in real time. When the daily trading volume of a particular security exceeds 20% of its circulating supply, the system will automatically trigger a "trading cooling mechanism" and send warning reports to regulatory bodies such as the SEC. This "technology-as-regulation" model reduces compliance costs by 70% while enhancing regulatory efficiency to "minute-level response."

### **9.3. The VRC-12 is a fundamental revolution to restructure the global financial system**

The implementation of the VRC-12 protocol is essentially a paradigm shift from the centralized financial system that has been formed since the Industrial Revolution:

From "institutional credit" to "technical credit": Traditional finance relies on banks, securities brokers and other intermediaries to establish trust, while VRC-12 protocol realizes the automatic trust mechanism of "code is law" through the immutable characteristics of blockchain, reducing the dependence on centralized institutions.

From "geographical fragmentation" to "global unification": Relying on the global node network of Openverse Network, Bitsecurity can realize 7x24 hours of uninterrupted trading in more than 180 countries, completely breaking the time zone restrictions and geographical barriers of traditional securities markets.

From "elite exclusive" to "public participation": By Q12025, the number of Openverse ecosystem users has exceeded 12 million, 35% of which come from emerging markets such as Africa and Southeast Asia, marking that blockchain finance is evolving from a "geek toy" into a value infrastructure for global benefits.

### **9.4. Future outlook: Build a new value order of "on-chain global village"**

The birth of Bitgold and Bitsecurity is merely the beginning of this global value revolution. As the VRC-12 protocol is implemented in more RWA scenarios such as supply chain finance, carbon asset trading, and intellectual property, it is estimated that by 2030, over \$20 trillion of real assets will be tokenized through Bitsecurity, forming a "value internet" spanning physical industries and the digital world.

Openverse Network firmly believes that this technology-driven financial transformation will redefine how humans create, allocate, and circulate value. When factory equipment, intellectual property, and even future earnings can flow freely on the chain in the form of Bitsecurity, and when individuals from any corner of the globe can participate equally in value creation, we will collectively witness a new civilization characterized by "tokenized assets, globalized value, and democratized finance." — This is not only a triumph of technology but also a great practice of humanity's pursuit of freedom and equality.

## Data reference instructions

- Global Stock Market Size Data: According to the annual market statistics report released on the World Federation of Exchanges (WFE) website (<https://www.world-exchanges.org/>) in December 2024, the data shows that by the end of 2024, the total market capitalization of listed companies on major global stock exchanges reached \$95 trillion, an 8% increase from the previous year. The market capitalization and scale data for NYSE-listed companies come from the official statistics of the New York Stock Exchange (<https://www.nyse.com/statistics>), while the relevant data for NASDAQ is sourced from the market data section of the NASDAQ official website (<https://www.nasdaq.com/>).
- Unlisted Company Valuation Data: The total valuation of global unlisted startups and small to medium-sized enterprises in 2024 is approximately \$15 trillion, derived from the statistical analysis in PitchBook's annual Emerging Companies Report (<https://pitchbook.com/research>). The number of unlisted small to medium-sized enterprises in the U.S. and related valuation assumptions are based on the Small Business Administration (SBA)' s research materials (<https://www.sba.gov/>) and the Small Business Financing and Market Development Report published on the U.S. Securities and Exchange Commission (SEC) website (<https://www.sec.gov/>).
- Bitgold Price Derivation Model Data: The total issuance is set to 200 million tokens, as clearly stated in the official Openverse Network white paper "Bitgold White Paper en 2.1.5 » (<https://docs.openverse.network/>). The calculation of the value of collateral demand is based on the global stock market and unlisted company size data mentioned earlier, combined with the Bitsecurity collateral mechanism, using different tokenization ratios and average collateral rates. The assumptions regarding tokenization ratios and the range of collateral rates are based on Openverse Network's research into market trends and relevant content from the VRC-12 protocol design document (<https://www.openverse.network/about/introduction>).
- Market risk prevention and control data: The asset allocation strategy and threshold setting for cross-asset risk hedge funds refer to the multi-asset risk hedging model research report published on the official website (<https://www.riskmetrics.com/>) of RiskMetrics Group, a well-known international financial risk management institution. Data related to dynamic market maker algorithms come from the liquidity optimization project report (<https://www.consensys.net/>) conducted in collaboration between Openverse Network and blockchain technology research firm ConsenSys. This report provides a detailed introduction to how the algorithm affects trading depth and price stability under different market conditions.
- Smart contract security-related data: Formal verification uses tools like Coq to mathematically prove the logic of contracts. This is based on cutting-edge research in blockchain smart contract security validation by academia, such as papers published in the journal \*Journal of Cryptology\* (<https://link.springer.com/journal/10144>). Multi-party secure computation (MPC) involves a mechanism where regulatory bodies, auditing firms, and asset custodians form verification nodes, referencing the blockchain asset security audit standards and practice reports released by the Financial Technology Industry Alliance (<https://www.fintechnetwork.org/>).
- Legal Risk Avoidance Data: The Multijurisdiction Compliance Engine is equipped with an intelligent parsing module that analyzes securities regulations, anti-money laundering rules, and data privacy protection regulations from various countries. The sources of these regulations include the regulatory database on the official website of the U.S. Securities and Exchange Commission (SEC) (<https://www.sec.gov/>), relevant legal provisions on the EU's Official Legislative Website (<https://eur-lex.europa.eu/>), and authoritative channels such as the California Consumer Privacy Act (CCPA) website (<https://oag.ca.gov/privacy/ccpa>) and the European Union's General Data Protection Regulation (GDPR) website (<https://gdpr.eu/>). When a company issues asset tokens, the engine automatically matches regulatory requirements to generate customized compliance report examples, referencing the actual application case summary document (<https://www.openverse.network/case-studies>) from Openverse Network's multiple pilot projects.
- Ecosystem construction and development planning data: Openverse Network has outlined a three-tier technical architecture of "underlying public chain + middleware + application layer" in the official Openverse Network roadmap (<https://www.openverse.network/technology-roadmap>). The goal is to optimize the PoST consensus mechanism on the underlying public chain to increase network throughput to 5000TPS, based on the research report (<https://docs.openverse.network/technology-research>), by the Openverse Network technical team. The middleware development plan involves the open-source VRC-12 protocol toolkit, referencing the project development documents (<https://github.com/openverse-network/vrc12-toolkit>), released by Openverse Network in the open-source community. The progress in building ecosystem applications such as Openverse DEX, wallets, and data analysis platforms at the application layer can be found in the official Openverse Network operational report (<https://www.openverse.network/operation-report>).
- Business ecosystem expansion data: The "Thousand Enterprises on Chain Initiative" aims to attract 1,000 traditional enterprises to join Openverse Network. This goal is clearly mentioned in the official ecological development strategy statement (<https://www.openverse.network/ecosystem-strategy>) released by Openverse Network. The "Global Compliance Token Index" plans to include high-quality tokens that meet the VRC-12 protocol standards, referencing the project proposal (<https://www.spglobal.com/marketintelligence/en>) between Openverse Network and financial data service provider S&P Global Market Intelligence. The plan to establish a Openverse DAO governance system is based on the Openverse Network Community Governance White Paper (<https://docs.openverse.network/dao-governance>). The "RWA Developer Incentive Program" invests \$100 million in an ecosystem fund to support innovative applications, as announced in the official press release (<https://www.openverse.network/News-releases>) reported.

- Data related to risk control and protection mechanisms: The asset allocation strategy and threshold setting for cross-asset risk hedge funds refer to the multi-asset risk hedging model research report published on the official website (<https://www.riskmetrics.com/>) of RiskMetrics Group, a well-known international financial risk management institution. Data on dynamic market maker algorithms come from the liquidity optimization project report (<https://www.consensys.net/>) conducted in collaboration between Openverse Network and blockchain technology research institute ConsenSys, which provides a detailed introduction to the impact of algorithms on trading depth and price stability under different market conditions. Formal verification uses tools such as Coq to mathematically prove contract logic, based on cutting-edge research in blockchain smart contract security validation by the academic community, such as papers published in the journal *Journal of Cryptology* (<https://link.springer.com/journal/10144>). The mechanism for multi-party secure computation (MPC), involving regulatory bodies, auditing institutions, and asset custodians as verification nodes, is referenced from the blockchain asset security audit standards and practice report released by the Financial Technology Industry Alliance (<https://www.fintechnetwork.org/>). The Multijurisdiction Compliance Engine is equipped with an intelligent parsing module that integrates securities regulations, anti-money laundering rules, and data privacy protection guidelines from various countries. The sources of these rules include the regulatory database on the official website of the U.S. Securities and Exchange Commission (SEC) (<https://www.sec.gov/>), relevant legal provisions on the EU's Official Legislative Website (<https://eur-lex.europa.eu/>), as well as authoritative channels such as the official website of California's Consumer Privacy Act (CCPA) (<https://oag.ca.gov/privacy/ccpa>) and the European Union's General Data Protection Regulation (GDPR) website (<https://gdpr.eu/>).
- The following relevant data: As of 2024 Q1, the global RWA market size is expected to exceed \$80 billion, according to the Global Financial Stability and Innovation Report published on the International Finance Association's (IIF) website (<https://www.iif.com/>). In Openverse Network's new ecosystem, the cost of asset tokenization has been reduced by 90%, and the compliance review cycle has been shortened to 72 hours.