

[JTC: This is an informative background article on a current trend in the crypto-blockchain industry. Bedrock will obviously be perceived as a part of this movement (though its conception antedates it). Bizarre lacuna in the author's list of RWA categories: wouldn't commodity *gold bullion* be an even more obvious candidate than art or real estate?]

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Everything You Need to Know About Real-World Asset (RWA) Tokenization

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Did you know that the process of bringing assets from the physical world into the digital space as tradable tokens on a blockchain is known as 'Real-world Asset Tokenization'? Here's a comprehensive guide to help you understand everything you need to know about it.

The emergence of blockchain technology has initiated a connection between the physical and the virtual world. The technology enables the digital representation of real-world assets (RWAs), including physical items, digital assets, and data. This transformation, known as tokenization, allows a wide range of assets, from art and real estate to stocks and personal data, to be represented as digital tokens on the blockchain. As a result, tokenizing RWAs opens up new ways to transfer ownership, share revenue, and enhance liquidity for assets that were previously less liquid. Thus, real-world asset (RWA) tokenization involves the changing of a non-digital asset to a digital asset on the blockchain.

This guide explores the growing trend of RWA tokenization, defining real-world assets and delving into the benefits and examples across various industries such as real estate, commodities, intellectual property, art, and travel.

Real-World Assets in Crypto Space

Real-world assets can be any assets with an underlying value in the physical world. They can be tangible or intangible, varying from art and collectibles, real estate, and stock commodities to personal data and intellectual property.

Real-world assets transformed into digital tokens and stored on a blockchain are referred to as tokenized real-world assets. Notably, real-world assets in the crypto space are categorized into two types:

1. Fungible assets. These assets are interchangeable and divisible. They allow an exchange of one unit for another unit with value being retained. Examples of fungible assets are stablecoins, digital tokens, and tokenized commodities such as gold and oil.
2. Non-fungible assets. Non-fungible assets are indivisible and each unit has unique properties and value. Examples of these assets include [non-fungible tokens](#) (NFTs) functioning as digital tokens representing rights to some physical or digital assets including art, music, or collectibles.

To sum up, stablecoins, real estate, commodities and precious metals, art and collectibles, books and music, intellectual property, vehicles, salaries and invoices, and consumer goods are all types of real-world assets.

Real-World Assets and DeFi

Real-world assets in the cryptocurrency domain denote a digitized physical asset that is made available for use in **decentralized finance** (DeFi). These assets constitute a great portion of the financial value in the global space, and they hold a significant status in the traditional finance industry.

In essence, real-world assets are any assets that hold an underlying value in the physical world while being utilized in the DeFi space. Hence, it bridges the gap between traditional finance and decentralized finance.

The DeFi industry allows people to leverage opportunities where they can access more money and try out different types of investments.

Amid the pivotal metrics defining DeFi, Total Value Locked (TVL) emerges as a frontrunner. This metric serves as the yardstick for quantifying the capital entrenched within diverse DeFi protocols, with a direct correlation between higher TVL and amplified utility.

More money in DeFi means it's more useful. But when the fortunes of DeFi waned amidst subdued market movements, some projects had issues, and the market saw a significant downturn. Consequently, the projects weren't useful, and some didn't work well, so money started leaving.

Now, DeFi investors are looking for safer investments like real-world assets (RWAs). In 2023, the value of real-world assets grew by \$1.05 billion. A big portion of this, \$855.7 million, came from things like treasuries, real estate, and private credit.

Investors also put more money into bonds and treasuries, making them grow by \$557 million. This shows that people in DeFi are choosing stable things like real-world assets to make their money safer and more reliable.

Tokenizing RWAs

As mentioned earlier, real-world asset tokenization involves transforming a non-digital asset into a digital asset on the blockchain.

There are steps that a real-world asset undergoes before it can be tokenized. These steps are as follows:

1. Identification of assets to be tokenized. This is the first step when it comes to asset tokenization, assets to be tokenized must be identified. This stage includes the physical availability of the assets, ownership, legal claim, and its determining value.
2. Identification of a platform to mint the tokens. This is the second process in RWA tokenization, it involves identifying the platform on which to mint the tokens. There is a need for the token developer to choose among the players offering tokenization as a service (TaaS).
3. Smart contract development. This stage involves developing a smart contract for the token, the smart contract is software that manages the functionality of tokens on a blockchain. All information regarding the creation and movements of the digital asset is contained in it.
4. Token creation. There is a need at this stage to create a security token, this implies the digital representation of the real-world Asset on the blockchain. The developer links the created token with the asset, this paves the way for the issuance of the asset.
5. Security token issuance. This last stage is the phase where the token is issued to the primary market, it's regarded as the security token offering (STO), and a fraction of the total tokens is sold to selected investors to raise project funds.

Utilizing RWAs

The concept of real-world asset utilization in DeFi can be leveraged for yield generation via the following methods;

1. Lending and borrowing. On lending platforms, real-world assets are used as instruments of debt or collateral. As a result, this enables users to engage in both borrowing and lending activities with crypto.
2. Trading and investing. Users of exchange platforms engage in the purchase and sale of cryptocurrencies as a result of real-world asset tokens.
3. Farming and staking. Via these two mechanisms on reward platforms, additional tokens are earned by real-world assets by locking up assets or providing liquidity to pools.

Furthermore, there are at least four examples of projects in DeFi that reshape the dynamics of real-world asset (RWA) tokenization and utilization, these are as follows:

1. Ondo finance. This allows holders of stablecoin to access yields on their assets via the facilitation of investment in high liquid exchange-traded funds.

2. Centrifuge. This uses a protocol that enables originators of assets to secure liquidity from Defi. This is done by the tokenization of various real-world assets including invoices and mortgages. Investors have an engagement with these tokens using stablecoins hence earning an interest from the underlying cash flows.
3. Backed finance. This focuses on the tokenization of a specific product linked to publicly traded securities.
4. Maple finance. This provides a platform for cryptocurrencies and real-world asset lending pools. This provision is made by allowing crypto funds and fintech companies to utilize lending pools. This finance enables the tokenization of RWAs, which serves as collateral for stablecoins borrowing.

Advantages & Limitations of Using RWAs in DeFi

There is a wide range of benefits attached to the use of RWAs in DeFi, including but not limited to:

- Maximum transparency. The tokenization of real-world assets brought about a high level of transparency on the part of blockchain networks to their users.
- Increment in liquidity level. Limitations that are to the divisibility of tangible assets are being overcome via the process of tokenization.
- Cost reduction. There is a streamlining of trading process assets as a result of tokenization, thereby getting rid of the need for intermediaries and costs associated.

Though promising, the tokenization of RWAs has its limitations, some major challenges include:

- Regulation challenges.
- Scalability issues.
- Security.
- Limited investors' rights and control.

Final Thoughts

As the space continues to evolve, there is a high possibility in years to come that there will be a very significant adoption and integration of RWAs into blockchain finance due to the promising potential of these assets.

While RWAs have historically helped DeFi investors hedge against the doom that comes with a lack of real utility and poor tokenomics, they will remain a haven for enthusiasts who seek to generate yields even with less expertise.

Nonetheless, real-world asset (RWA) tokenization will bring about a revolution in our funding, trading, and asset management.