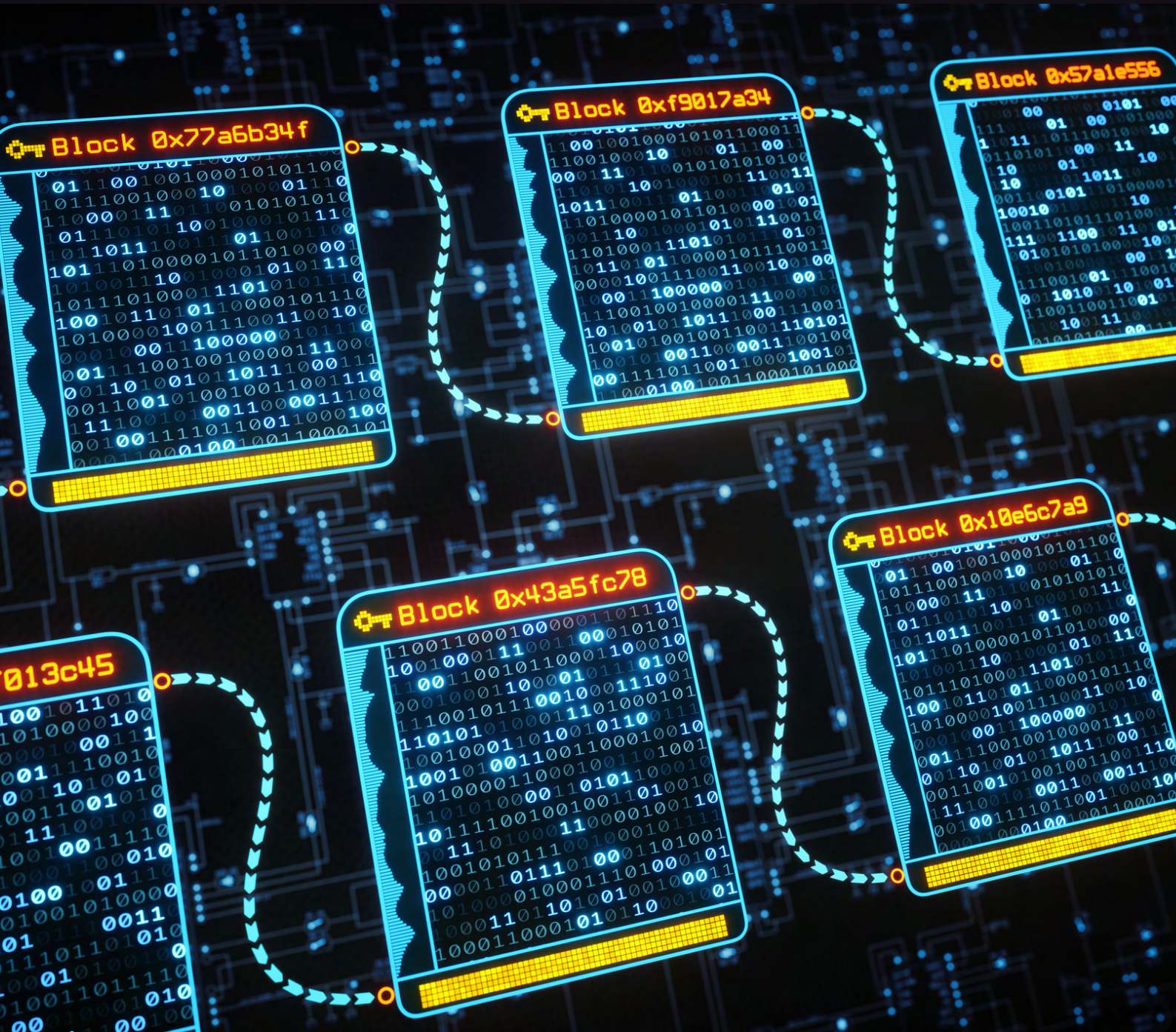


RWA REPORT

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"As dawn breaks on the financial frontier, DeFi emerges as the indomitable force setting unprecedented benchmarks. The promise is bold: yields in DeFi will perpetually outstrip traditional finance. And as we chart this thrilling trajectory, the aftershocks of this revolution might become palpable in a matter of months."

RWA T-BILLS PROTOCOLS

					
METRICS	Ondo Finance	Maple	OpenEden	Maker	Frax
PRODUCT	USDY, OUSG	---	TBILLS	sDAI	sFRAX
YIELD (UP TO)	4.60%	14.12%	5.33%	5%	20%
SOURCE OF YIELD	US treasury bills & Bank deposit	US treasury bills	US treasury bills	US treasury bills	US treasury bills
CURRENT TVL	\$164.67M	\$42.4M	\$12.37M	\$3.5B	---
LAST 6 MONTHS TVL GROWTH	500%	700%	NA	NA	NA

NON T-BILLS RWA PROTOCOLS

						
METRICS	TangibleDao	Credix	Backed	GoldFinch	Centrifuge	Arcade
PRODUCT	USDR	---	---	---	---	4K Watches
YIELD (UP TO)	15%	12%	7%	17%	15%	22%
SOURCE OF YIELD	Real estate and rentals	Institutional borrowers	Real-world securities	Real-world lending	Real-World business	Borrowers using RWA as collateral
CURRENT TVL	\$55.47M	\$27.33M	\$55.4M	\$101.03M	\$236M	---
LAST 6 MONTHS TVL GROWTH	150%	NA	NA	NA	37%	NA

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I INTRODUCTION

Since the DeFi summer of 2021, protocols have witnessed a significant drop in total value locked (TVL). This drop in TVL in turn reduced DeFi yields which rely heavily on on-chain activities like DEX transaction fees and borrowing costs within lending protocols.

During bullish market phases, when on-chain activities were high, investors enjoyed attractive yields and reinvested their profits in DeFi, creating a positive feedback cycle. The current bear market, characterised by reduced on-chain activity and crypto prices, exposes the vulnerability of this system. The rapid shift from a bull to a bear market can swiftly eliminate promising yield prospects for investors.

We are witnessing a huge breakthrough in finance, from this moment moving forward, yields will always be higher on DeFi than in traditional finance. This will attract huge amounts of capital and might very well start a full-blown bull market.

Real World Assets (RWAs) offer a solution to the problem of inconsistent DeFi yields. RWAs are off-chain assets that are tokenized and brought onto the blockchain to provide a sustainable yield source within DeFi. These assets encompass a wide range of traditional holdings, such as commercial real estate, bonds, and valuable items, which can be effectively tokenized. The recent bear market has led to a remarkable growth in the RWA sector, with established financial players like Goldman Sachs and Siemens actively exploring the integration of their assets onto the blockchain. Even established DeFi platforms like MakerDAO and Aave are adapting their frameworks to incorporate RWAs.

This report takes a deep dive into the dynamic world of RWAs, unravelling what they are, how they work, and why they matter. Additionally, it provides an extensive market analysis of the RWA ecosystem, shining a light on the prominent players in the field.

I REAL WORLD ASSETS EXPLAINED

Real World Assets (“RWAs”) are physical assets that exist off-chain, but are tokenized and brought on-chain to be used as a source of yield within DeFi. RWAs are basically tokens representing the value of a real-world asset, which is brought on-chain so that it can be utilised on a DeFi protocol.

RWAs can be either tangible assets, such as gold and real estate, as well as intangible assets, such as government bonds or carbon credits. RWAs represent a wide array of conventional assets, including commercial real estate, bonds, vehicles, and virtually any valuable item that can be appropriately tokenized and tracked.

Integrating Real World Assets onto the blockchain is driven by the belief that DeFi offers unique capabilities largely unavailable in traditional finance. Composability, real-time auditability, permissionless innovation, reduced third-party risks and cost efficiency being some of its main advantages.

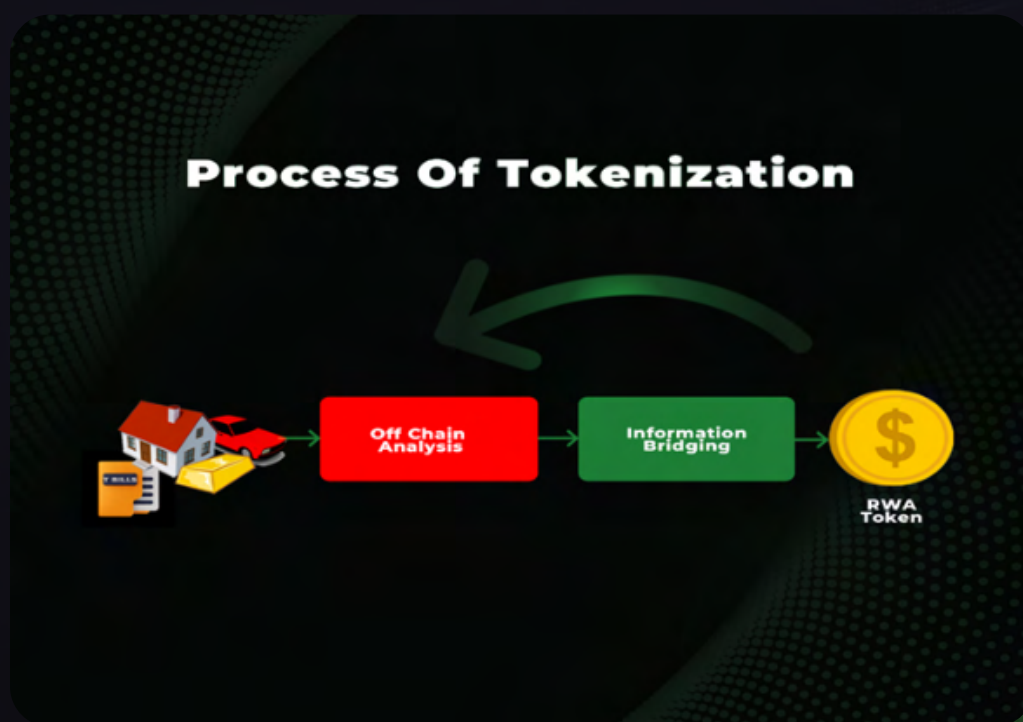
Traditional financial systems, known as "TradFi," have historically relied on intermediaries involving middlemen, checks, and regulations. While these intermediaries have added a level of security, they've often come at the cost of optimal market efficiency and opportunities for asset holders. DeFi has the potential to challenge these limitations inherent in TradFi, leading to significant enhancements in market efficiency and opportunities for asset holders.

DeFi's innovative approach to financial markets has the potential to yield substantial cost savings in comparison to traditional financial systems. These savings primarily stem from the reduction in labour and operational expenses, which tend to be on the high side in complex TradFi setups.

At this juncture, you might be pondering the method behind "tokenizing a physical asset." In reality, these assets go through specific procedures to attain tokenization.

I These processes encompass:

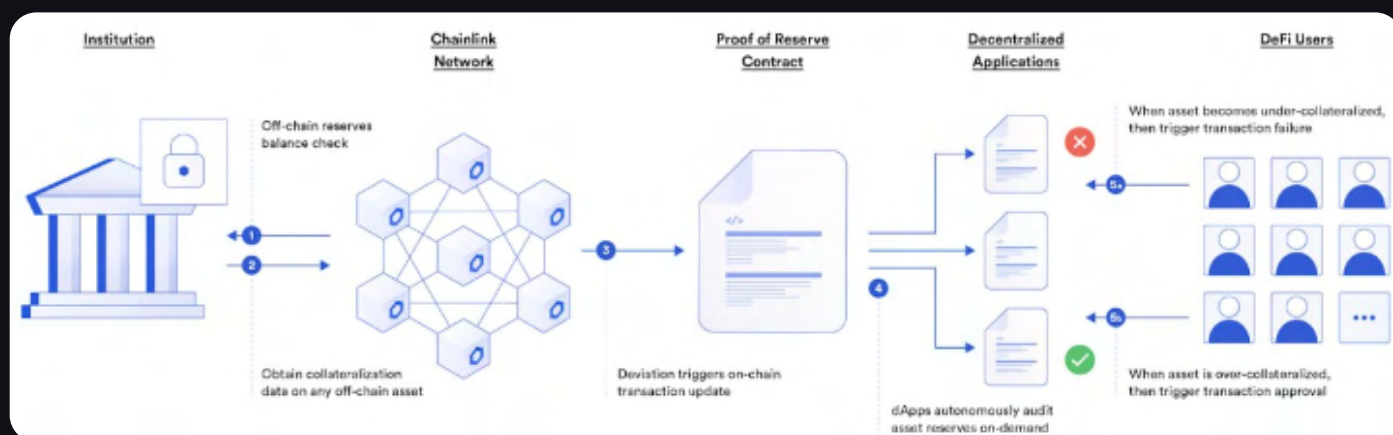
- ◆ **Off-Chain Analysis:** Before integrating into DeFi, a real world asset is defined off-chain. Its economic value, ownership details, and legal protections are established. Ownership is verified through documents like deeds or invoices. If legal matters arise, clear procedures are outlined.
- ◆ **Information Bridging:** Asset data is transferred onto a blockchain. This is achieved through tokenization, where asset information is coded and linked to digital tokens. For regulated assets, compliant onboarding methods are employed. Oracles, like Chainlink, bring external data to DeFi platforms to mirror real-world asset values.
- ◆ **RWA Protocol Demand and Supply:** DeFi protocols are central to this process. They initiate and manage RWA creation (supply) and also cater to investor demand for RWA opportunities (demand). Essentially, they serve as both the originators and marketplaces for RWAs.



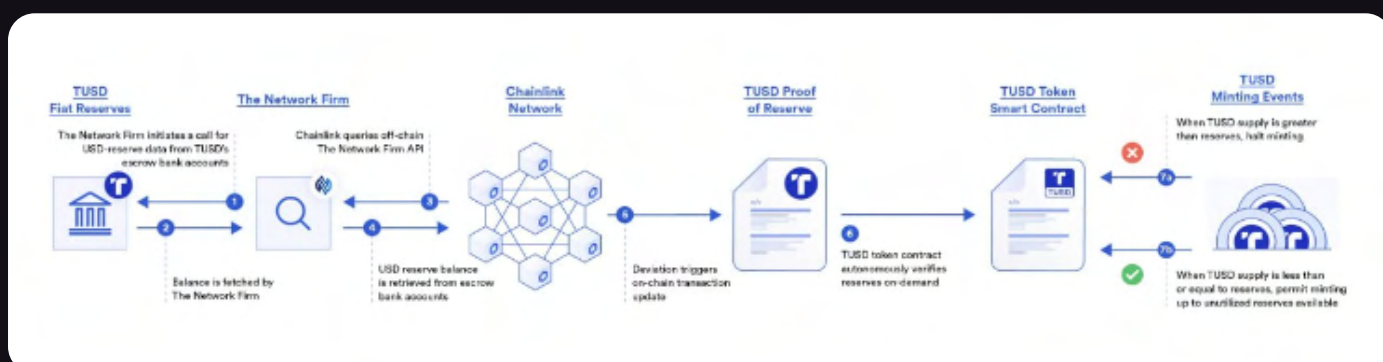
CHAINLINK PROOF OF RESERVE (PoP)

Proof-of-Reserve (PoR) is a way of showing – with little or no doubt – exactly how many tokens are at any exchange that adopts the technique. It is an auditing technique used to form assets in control.

The moment control of assets is given to a third-party, such as an exchange, bank or any other institution, the user loses control. With PoR mechanisms more transparency is provided about assets managed on behalf of third parties.



In the case of FTX, this could have in theory prevented customers' money from being moved where it shouldn't have been. In this case from FTX to Alameda Research but for many other financial institutions this could simply mean to prove that they are liquid. DeFi protocols can also use it to prove liquidity in their balance sheets.



Off-chain: Involves a third-party provider receiving application programming interface (API) access from an exchange, its custodian, or its auditor to independently verify the exchange's holding.

The advantages of PoR compared to identical systems without it is that it will force third-parties to be more transparent. If there is no proof about handling funds, why would users entrust them their funds? Proof-of-Reserve can change the blockchain industry through self-regulation and make certain regulatory enforcement obsolete as a consequence.

I ANALYSIS OF RWA ECOSYSTEM

The DeFi sectors providing access to RWAs are experiencing significant growth, moreover, both cryptocurrency-oriented and traditional finance companies are showing heightened interest in these DeFi markets. In this section, we would look at different types of RWA markets currently existing, their specific features and potential for growth.

RWAs play a pivotal role in the following markets:

- ◆ Equity-based DeFi markets
- ◆ Real Estate tokenization
- ◆ Private credit offerings
- ◆ US Treasuries

Equity-based DeFi markets

The equity and real asset markets within the RWA space are relatively small due to several reasons. Firstly, these assets, like stocks and commodities, are heavily regulated and typically traded on public markets. Secondly, equity and real asset protocols face operational complexities, as they must handle physical ownership and facilitate ownership transfers. For example, Backed Finance, a protocol offering public equity RWAs, must comply with Swiss-DLT regulations and fully back RWA assets with ownership of underlying stocks.

Real Estate tokenization

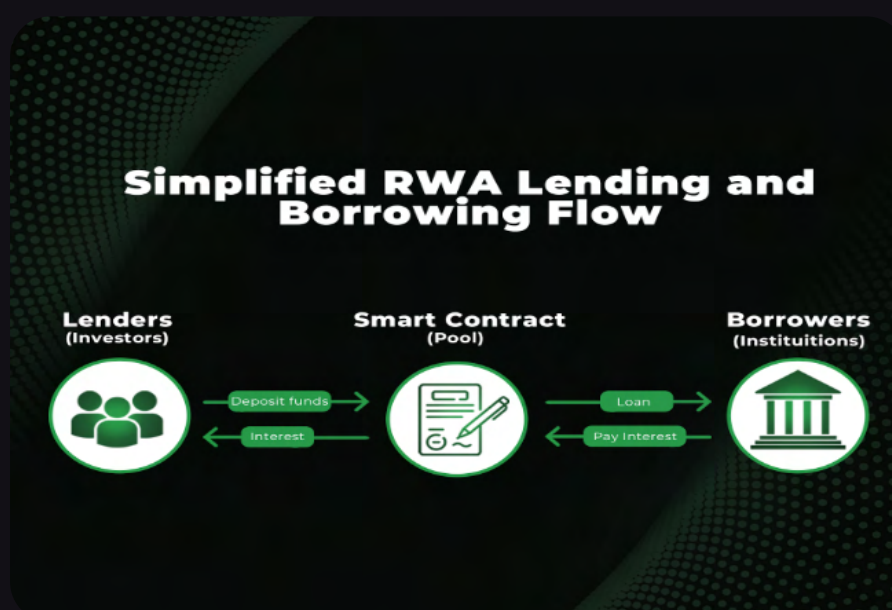
It offers the advantage of digitally representing real estate, allowing for fractional ownership of properties. **This means that more investors can participate in the real estate market by owning a fraction** of a property, making it more accessible.

The process involves assigning a specific property a set number of tokens, which can then be traded on the market. RealT is an example of a platform that utilises real estate-backed tokenization. In their protocol, lenders deposit capital and provide liquidity, and in return, smart contracts issue tokens that generate interest. These tokens provide lenders with freedom and flexibility, enabling them to easily transfer, securely store, and efficiently trade these assets.

Private credit offerings

In this sector, borrowers mainly institutions provide real-world assets (RWAs) as collateral, with due diligence conducted in the latter case. Lenders supply capital to institutions, and interest incentivizes them to participate. Lending pools, based on smart contracts, act as escrows, ensuring transparency through blockchain tracking.

Maker, Centrifuge and Maple Finance are pioneers in RWA lending. Centrifuge connects businesses and investors via smart contracts and NFTs, allowing companies to tokenize assets as collateral. Maple Finance offers credit pools run by professionals, underwriting loans to businesses following KYC and credit assessments. Both platforms provide DeFi users with various yield options.



US treasury T-Bills

Treasury bills (T-bills) are short term debt obligations offered by the government. The government sells these bills at a discount rate (rates lower than their actual face value) in order to finance projects such as school buildings, roads, railways etc. The interest that T-bills investors gain are gotten at its maturity date. This is to say that T-bill investors are not paid interest regularly, they get interest only at the maturity date of the T-bill. However if an investor wants to sell their T-bills before it's maturity date, it could be sold on secondary markets.

In the DeFi world these offerings are tokenized and projects that foresee the tokenization oblige to all the rules and regulations placed by the government. Hence they are called tokenized treasury bills or tokenized treasury bonds.

Previously, T-Bills investors encountered several challenges, including:

- ◆ **Regulation:** Certain people like the unbanked were restricted from buying T-Bills, this greatly limits the exposure of T-bill yields to potential investors.
- ◆ **Intermediaries:** These include middle men, they offer T-Bills on secondary market places but with high fees which sometimes scare off investors.
- ◆ **Centralization:** Most investors are not comfortable with buying T-bills from centralised regulators, reducing the exposure of T-bill yields to potential investors.
- ◆ **Slow settlement time**



| These are the problems that DeFi tends to solve:

- ◆ **Instantaneous liquidity:** Automatic Market Maker (“AMM”) models used in DeFi RWA protocols give asset holders access to more liquidity easily. These features are not commonly found within traditional systems.
- ◆ **Reduced investment threshold:** DeFi gives smaller investors (e.g. retail) gain exposure to T-bills through fractionalization of digital tokens. This opens up new markets and enables even smaller investors to gain exposure to assets with traditionally high investment thresholds.
- ◆ **Transparency:** Lastly, the transparency of the blockchain ledger provides market participants within DeFi unique clarity into transaction flow, asset ownership, and mark-to-market prices, which tend to be very hidden in TradFi systems, which would avoid bankruptcies like Evergrande or FTX.

This is a huge innovation, since this will enable DeFi to always have higher yields than TradFi - In this case by tokenizing and amplifying the already high yields paid on T-Bills, through strategies like looping and many others based on its composability, and in very low interest rate scenarios, the organic DeFi yields would outperform.



I TOP RWA PROTOCOLS

In this sector, we'll explore leading RWA protocols and examine their distinctive features.

ONDO FINANCE

Ondo leverages blockchain technology to democratise access to institutional-grade financial products and services. Through Ondo Finance, retail DeFi traders gain exposure to yields that were once exclusive to institutions and top-tier venture capital firms.

These institutional-grade financial products include treasury bills and bonds. They are able to achieve this by bringing these public credits on-chain through tokenization.

They are also in partnerships with high quality institutional partners like asset managers, custodians, fund administrators, lawyers, and more to ensure the top notch security of the products which they offer.

Ondo finance offers two main products which are:

- ◆ OUSG - (Ondo Short-Term US Government Bond Fund)
- ◆ OHYF- Ondo High Yield Corporate Bond Fund

Institutional-Grade Finance, Now On-Chain.

Ondo is building the next generation of financial infrastructure to improve market efficiency, transparency, and accessibility.

Compound

170% APY B-

OMMF

US Money Markets

4.73 AAA

OUSG

US Treasuries

5.12 \$164.61M TVL AAA

OHYG

High Yield Income

7.33 BB-

Now on Polygon Learn More

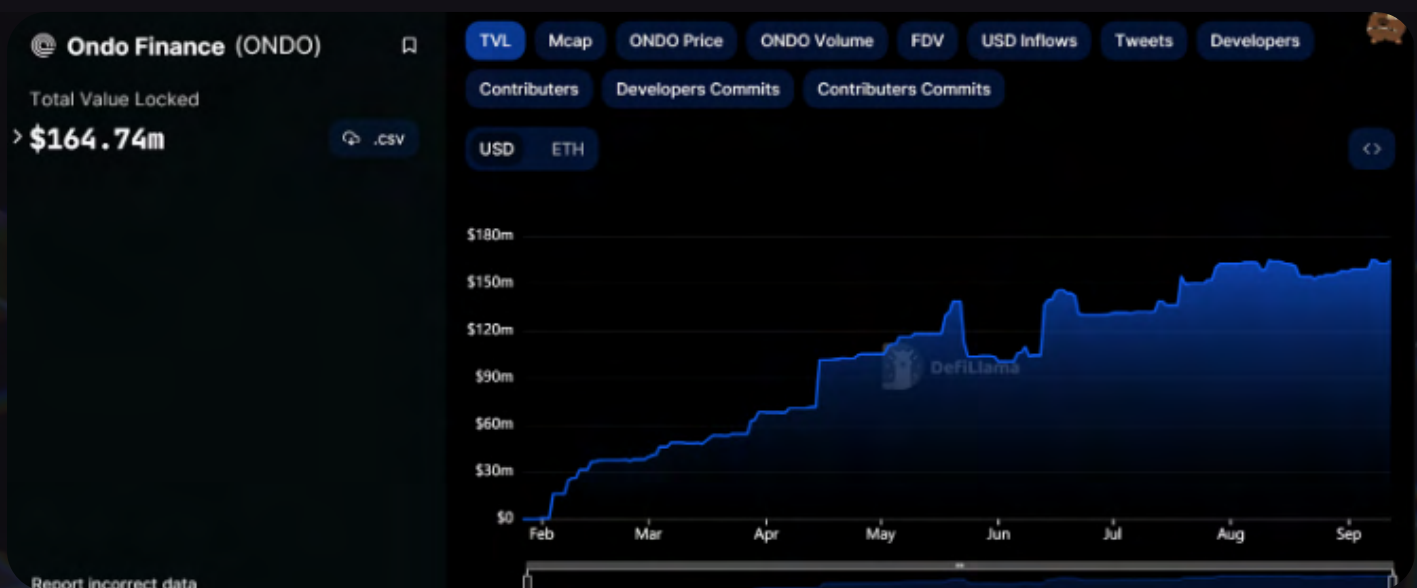
OUSG

This product provides traders with exposure to short-term US Treasuries, offering a consistent yield of 5.12%.

To access this yield, investors are required to undergo a Know Your Customer (KYC) process to whitelist their wallet. Only whitelisted wallets are permitted to send funds to the contract. Once whitelisted, the investor's USDC is utilised to purchase T-bills, generating the yield.

On top of these kinds of protocols there is a layer of platforms like Matrixdock, Flux or TProtocol, which enable non KYC people to also enjoy the T-Bill yields (more below). A common practice in this platforms is to let whitelisted parties get a commission when minting and redeeming the T-Bills tokens, since only the KYCd ones can legally do it. The people who aren't able to be KYCd, unbanked or opt out of KYC for safety reasons, can legally have and trade the T-Bills receipt tokens, which is also a break-through.

Currently Ondo has a Total Value Locked (TVL) of over \$164 Million on both Ethereum and polygon.

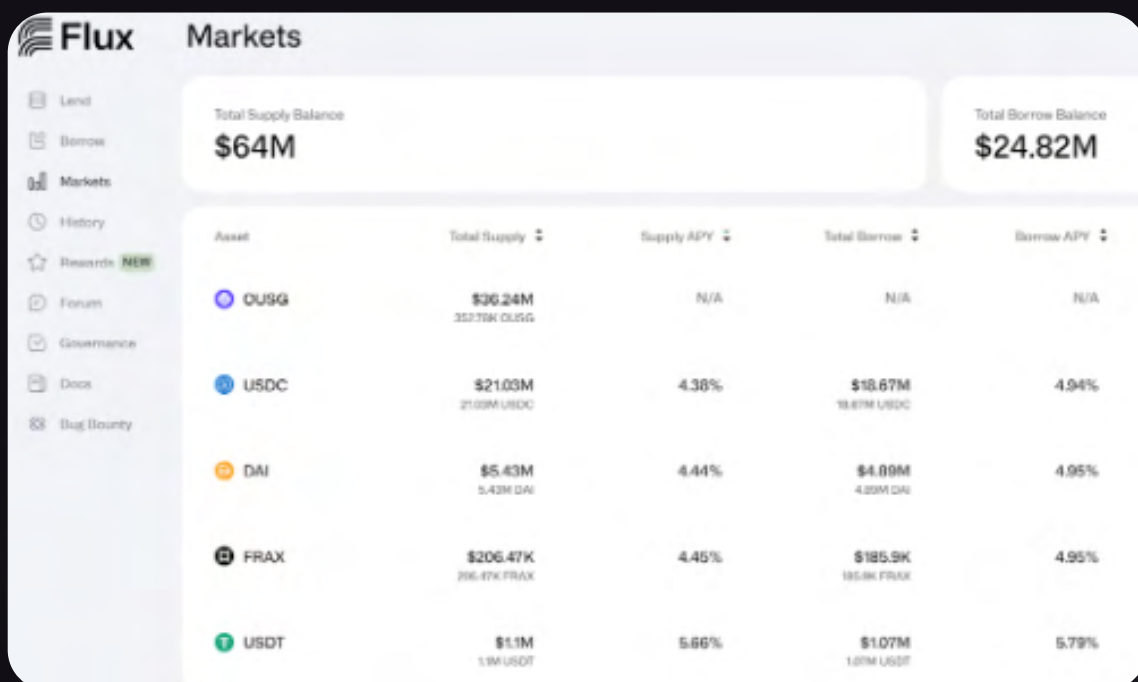


FLUX PROTOCOL

Flux Finance is a lending pool where lenders deposit assets to earn interest, lent to borrowers with collateral. Rates vary with usage, and there's a slight risk of loss.

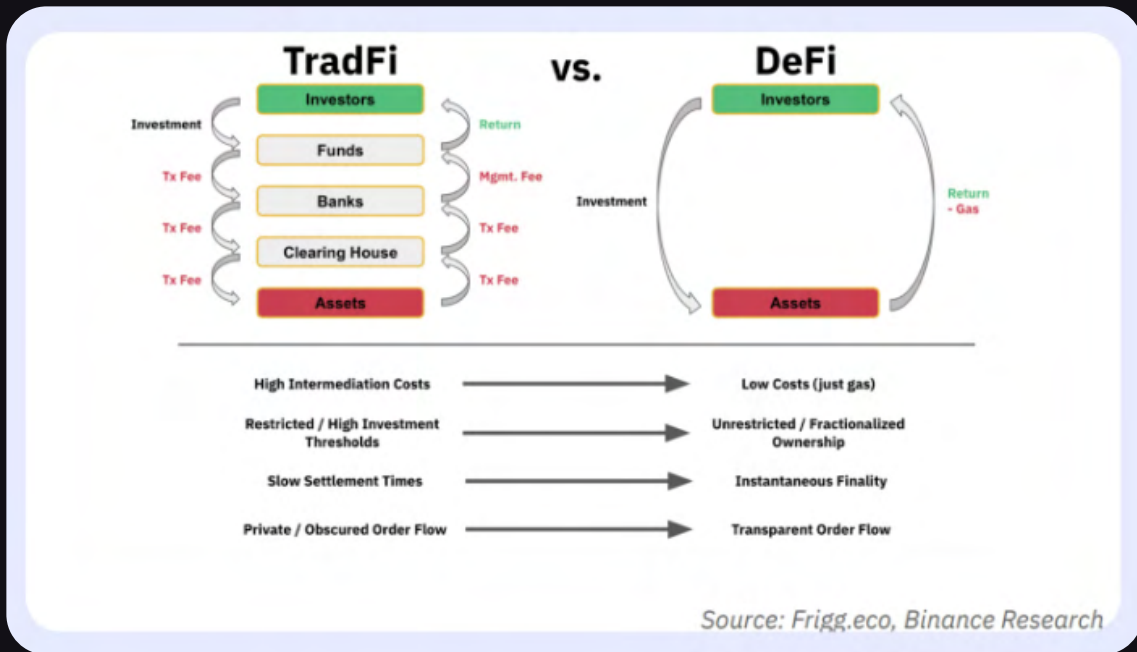
In Flux, you can easily put your assets to work by depositing them and creating fTokens – these are like digital tokens that show how much you've added to the platform.

Here's an example when you deposit USDC into Flux and make fUSDC:



Flux		Markets			
		Total Supply Balance			Total Borrow Balance
		\$64M			\$24.82M
Asset	Total Supply	Supply APY	Total Borrow	Borrow APY	
OUSG	\$36.24M 352.75K OUSG	N/A	N/A	N/A	
USDC	\$21.03M 21.03M USDC	4.38%	\$18.67M 18.67M USDC	4.94%	
DAI	\$5.43M 5.43M DAI	4.44%	\$4.89M 4.89M DAI	4.95%	
FRAX	\$206.47K 206.47K FRAX	4.45%	\$185.5K 185.5K FRAX	4.95%	
USDT	\$1.1M 1.1M USDT	5.66%	\$1.07M 1.07M USDT	5.79%	

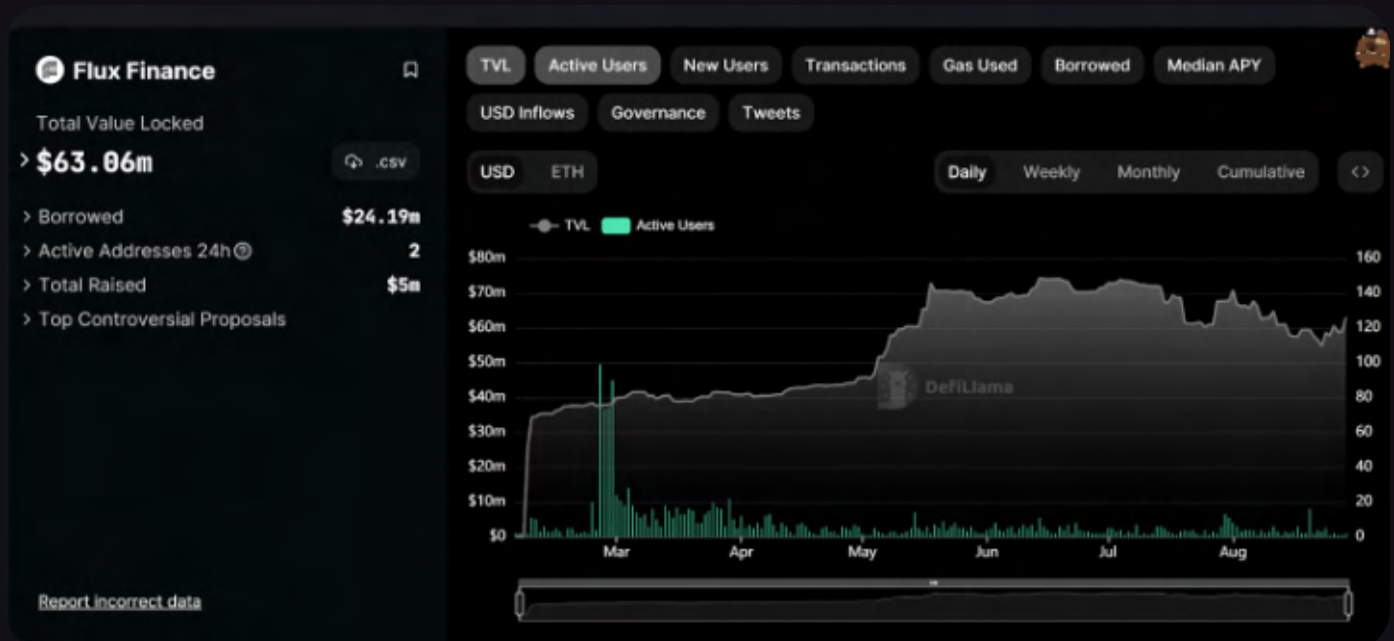
What happens is, other people can borrow the USDC you put in and buy T-Bills with it, then he or her keeps the difference between the T-Bills yield and the borrowing rate, on the other side is you who **now you can access T-Bills yield while also paying less commissions than in traditional finance.**



An exciting feature of the Flux protocol is that you can use OUSG (Tokenized Treasury bill) as collateral. Notably, OUSG already offers a yield of approximately 5%, and depositing it into Flux would potentially enhance that yield even further.

Borrowers offer collateral exceeding their debt, minting fTokens for interest. Rates adjust based on demand, and beyond a limit, rates increase to encourage repayments.

Flux is currently sitting at a TVL of \$64 million.



TPROTOCOL

TProtocol provides risk-free, interest-bearing tokens backed by a treasury with short durations. This innovation allows users to capitalize on the interest rate differential between stablecoins and treasury bills, offering a previously missing opportunity in the DeFi landscape.

TProtocol introduces a game-changing token trio: TBT, sTBT, and wTBT, each with its unique role.

◆ sTBT - The Stable Rebasers

sTBT maintains a stable value at \$1, with daily rebasing on workdays. Users earn interest from the treasury. This offering is exclusive to KYCed high-net-worth individuals and institutions on the Ethereum mainnet.

◆ TBT - The Permissionless Rebase Token

TBT stands for T-Bill token and is fully backed by permissioned sTBT issued by a multi-billion-dollar centralized DeFi institution. TBT is user-friendly, enabling minting with USDC at \$1 (excluding fees) and straightforward redemption. It offers a yield of approximately 4.485%

◆ wTBT - The Bridge Token

wTBT bridges rebasing and non-rebasing tokens, enabling integration into existing DeFi protocols.

TProtocol's token trio empowers users with a dynamic approach to navigate the DeFi landscape.



MAKER DAO

MakerDAO is a pioneering platform operating on Ethereum, making significant strides in embracing Real World Assets (RWA). It offers mainly institutions the ability to deposit real world assets as collateral into "vaults," unlocking the potential to borrow the protocol's native stablecoin, DAI, pegged to the US dollar. Vaults, essentially smart contracts, securely hold borrowers' Ethereum-based collateral until all borrowed DAI is repaid. This arrangement gives borrowers control over their assets, as long as their collateral's value remains above a specified threshold.

What sets MakerDAO apart is its failsafe mechanism. If the collateral's value falls below the required threshold, vaults automatically trigger a trustless liquidation process through auctions, ensuring loan repayment.

MakerDAO's governance DAO, MakerDAO itself, determines the types of collateral available to borrowers. In a pivotal 2020 decision, MakerDAO greenlit the use of RWA-backed collateral in vaults. To facilitate this, MakerDAO invested in oracle development, allowing for the seamless off-chain valuation of RWA-backed collateral.

The real measure of success lies in the numbers. **MakerDAO's RWA vaults now hold over \$3.48 billion in value**, a testament to its ability to scale DAI issuance through RWA-backed loans. This massive RWA presence plays a crucial role in maintaining MakerDAO's stable \$1 peg for DAI.

Collateralization

TOTAL VALUE LOCKED
\$ 3,438,510,186

COLLATERALIZATION RATIO
132%



Value locked by vault type

BlockTower Andromeda: \$ 1
Monetalis Clydesdale: \$ 1.2
Coinbase Custody: \$ 500M
H. V. Bank: \$ 100M
BlockTower S3: \$ 97.3M
Others: \$ 211M



Total DAI minted from collateral

RWA007: \$ 1.06B
RWA015: \$ 802M
RWA014: \$ 500M
RWA009: \$ 100M
RWA013: \$ 69.8M
Others: \$ 76.2M

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Even more impressively, RWA vaults have become a key revenue driver for MakerDAO. While overall revenue faced a downturn due to crypto market fluctuations, RWA vaults shone brightly. They contribute an annualized revenue of \$23 million, making up a substantial 56.7% of MakerDAO's total annualized revenue.

Institutional borrowers have flocked to MakerDAO's RWA collateralized vaults, each with unique plans for capital allocation. Notably, a significant portion of MakerDAO's RWA collateral, comprises US treasury bonds managed by Monetalis. Additionally, MakerDAO established a vault backed by \$100 million in loans from Huntingdon Valley Bank, marking a groundbreaking collaboration between a US-regulated financial institution and a decentralized digital currency protocol. Société Générale, a major French multinational bank, borrowed \$7 million from MakerDAO against €40 million in AAA-rated tokenized bonds.

Collateral list

☐ ALL ☐ ETH ☐ SC ☒ RWA ☐ ON-CHAIN


COLLATERAL	TOTAL SUPPLY	CHANGE 24H	DEBT CEILING	LOCKED	ANNUAL FEES	
Monetalis Clydesdale RWA007-A	1,064,950,318 of 1.25B	↑ 50M 4.93%	1,250,000,000 usage 85%	\$1.25B 117%	42,598,015 4%	>
BlockTower Andromeda RWA015-A	802,450,000 of 852M	↑ 50M 6.64%	1,280,000,000 usage 63%	\$1.28B 160%	36,110,253 4.5%	>
Coinbase Custody RWA014-A	500,000,000 of 500M Maxed	—	500,000,000 usage 100%	\$500M 100%	15,000,002 3%	>
H. V. Bank RWA009-A	100,000,000 of 100M Maxed	—	100,000,000 usage 100%	\$100M 100%	109,420 0.11%	>
BlockTower S4 RWA013-A	69,833,873 of 70M Maxed	—	70,000,000 usage 100%	\$85.2M 122%	2,793,355 4%	>
BlockTower S3 RWA012-A	50,770,807 of 80M	—	80,000,000 usage 63%	\$97.3M 192%	2,030,832 4%	>
6s Capital RWA001-A	14,348,036 of 15M	—	15,000,000 usage 96%	\$15.9M 111%	430,441 3%	>
Fortunafi RWA005-A	5,926,220 of 15M	—	15,000,000 usage 40%	\$17.2M 290%	266,680 4.5%	>
New Silver RWA002-A	5,113,566 of 50M	↓ 175k 3.31%	50,000,000 usage 10%	\$92.9M 1,817%	357,950 7%	>
TOTAL	2,613,392,821 of 2.93B	↑ 99.8M 3.97%	3,360,000,000 usage 78%	\$3.44B 132%	99,696,947	

In the evolving landscape of DeFi, MakerDAO stands as a prime example of successful RWA adoption, showcasing impressive scalability, revenue generation, and a diverse range of institutional borrowers.

The current landscape of Tokenized Real World Assets (RWAs) reflects a nascent stage with substantial untapped potential. Only a minute fraction of tradable assets has transitioned onto blockchain networks. This is indicative of a promising growth trajectory for RWAs. To understand this potential better, let's delve into the benefits of tokenizing RWAs and assess the room for expansion by comparing their real-world valuation with the existing tokenized counterparts.

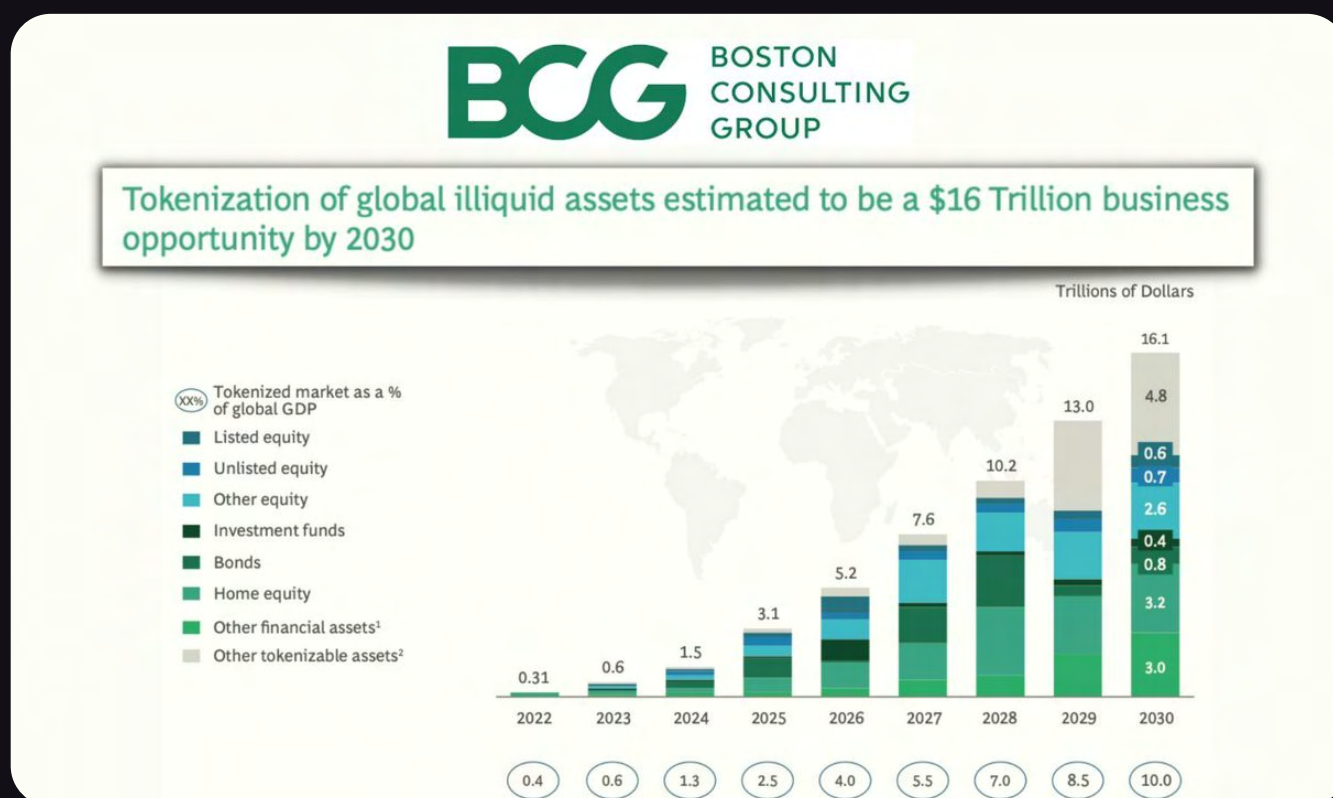
Tokenized RWAs Offer Numerous Advantages:

- ◆ **Enhanced Liquidity:** Tokenization of RWAs facilitates easier and quicker transactions. It transforms traditionally illiquid assets, such as real estate or fine art, into more accessible, liquid forms, which can attract a broader range of investors.
- ◆ **Elimination of Middlemen:** By removing intermediaries like brokers and custodians, tokenized RWAs streamline transactions, reduce administrative overhead, and enhance transparency. This not only benefits investors but also reduces friction and costs in the market.
- ◆ **Fee Reduction:** Tokenization significantly reduces transaction fees and administrative costs associated with managing real-world assets. This translates to more attractive returns for investors.
- ◆ **Decentralisation:** Tokenized RWAs operate on decentralised blockchain networks, mitigating single points of failure and enhancing security. This decentralisation reduces the risk of market manipulation and fraud, thereby increasing investor confidence.

Given these advantages, it's reasonable to anticipate growing investor preference for tokenized RWAs over time.

Estimating Growth Potential:

To gauge the growth potential of tokenized RWAs, we must compare the current state of tokenization with the vast universe of real-world assets. The chart below illustrates this comparison:



In conclusion, Tokenized Real World Assets represent an emerging sector with immense potential.

The benefits they offer in terms of liquidity, cost reduction, and decentralisation make them an attractive investment option. The comparison with the total valuation of real-world assets underscores the vast untapped market that can be addressed by the continued growth of tokenized RWAs. As blockchain technology and regulatory frameworks evolve, we can expect a significant expansion in this sector, with more investors recognizing the value of tokenized RWAs in their portfolios.


I THEBIT RESEARCH

Thebit is a lunar impact crater located on the southeast shore of Mare Nubium. It was this mooncrater that inspired us to form our company called 'TheBit Research'.

TheBit Research consists of a team of experienced analysts and tokenomics researchers.




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