



## Real-World Assets (RWAs) Tokenization Report - April 2023 Recap

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This report highlights developments related to the tokenization and on-chain adoption of Real-World Assets (RWAs).

It includes details on centralized industry players and asset class coverage, as well as coverage of select decentralized finance protocols working to integrate RWAs on-chain.

Our report is compiled from Digital Asset Research's (DAR's) data sources, public sources, media reports, and press releases, and, while wide-ranging, covers only representative initiatives related to the development and tokenization of RWAs in the digital asset space.

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## Introduction

While many cryptocurrencies offer solutions to the challenges encountered by Web3 users, only a few digital assets possess characteristics that connect them to real-world economic activities. Skeptics contend that cryptocurrency use cases are confined to the digital realm, and therefore the value of crypto assets is not sustainable, given that much of daily life revolves around the physical world.

Real-world asset tokenization bridges this gap between the physical and digital worlds. Real-World Assets (RWAs) are assets that exist tangibly offline, such as real estate or equities. Tokenization refers to the process of generating a digital certificate that is impervious to alteration or replication to represent an RWA on a blockchain. These digital certificates are backed by real-world assets as collateral.

Through tokenization, investors can gain access to conventional investment opportunities in a more trustless and efficient manner via blockchain technology. Settlement can be conducted in real time and investors are always able to see where their assets are stored on chain. The spectrum of assets that could be tokenized includes but is not confined to, real estate, private credit, securities, commodities, and fiat currencies. A significant proportion of the world's financial value is ascribed to RWAs, thereby presenting the potential for RWA tokens to access a total addressable market equivalent to the largest financial markets.

In this report, entities working on RWA initiatives are classified into two groups:

- Centralized organizations that offer tokenization services are detailed in the **CeFi RWA** sections.
- Decentralized Finance (DeFi) protocols that integrate RWAs with on-chain market participants are detailed in the **DeFi RWA** sections.

## Significant RWA Tokenization News

- Blackrock Chairman Larry Fink wrote in a [letter](#) to investors that the firm is currently exploring the tokenization of equities and bonds.
- Italian asset manager Azimut Group [tokenized](#) units in its AZ RAIF 1 asset-backed securities fund, using Allfunds Blockchain and BNP Paribas Securities Services as its blockchain and service providers.
- Bank of America [reported](#) that tokenization of real-world assets is a “key driver of digital asset adoption”.
- Citi [predicted](#) in a recent market report that the asset tokenization landscape will reach \$4 trillion by 2030.
- In February 2023, Hong Kong’s government [tokenized](#) its first batch of green bonds worth \$100M as part of its Green Bond program.
- Siemens [issued](#) its first tokenized bond with a one-year maturity via the Polygon blockchain.
- The European Investment Bank (EIB), in partnership with Santander, Goldman Sachs Europe, and Société Générale, [launched](#) Project Venus, the bank’s second euro-denominated bond issuance created on-chain.
- Centrifuge, in collaboration with MakerDAO and BlockTower Credit, [announced](#) a \$220 million fund in December 2022, which represents the largest on-chain investment to date in RWAs.
- INX Digital [collaborated](#) with Greenbriar Capital to launch the first regulated tokenized shares of a publicly traded company.
- Credit Suisse led a \$65M [funding](#) round for Taurus, a tokenization platform. Deutsche Bank also participated in the round.

## CeFi RWA Industry Players

The table below provides details on a selection of centralized tokenization service providers.

Entity	Website	Founded	Jurisdiction	In-House Blockchain	Tokenized Asset Marketplace	Fractionalization of Assets	Self-Custody	Total Funding
<a href="https://10xts.com/">10XTS</a>	<a href="https://10xts.com/">https://10xts.com/</a>	2017	United States	Yes	No	Yes	Yes	\$2,400,000
<a href="https://alphapoint.com/">AlphaPoint</a>	<a href="https://alphapoint.com/">https://alphapoint.com/</a>	2013	United States	No	No	Yes	No	\$23,200,000
<a href="https://www.archax.com/">Archax</a>	<a href="https://www.archax.com/">https://www.archax.com/</a>	2018	United Kingdom	No	Yes	Yes	Yes	\$37,500,000
<a href="https://bankex.com/">Bankex</a>	<a href="https://bankex.com/">https://bankex.com/</a>	2015	United States	No	No	Yes	Yes	\$70,600,000
<a href="https://www.enigmavault.io/">Enigma Vault</a>	<a href="https://www.enigmavault.io/">https://www.enigmavault.io/</a>	2020	United States	No	No	No	Yes	n/a
<a href="https://www.fnality.org/home">Fnality International</a>	<a href="https://www.fnality.org/home">https://www.fnality.org/home</a>	2019	United Kingdom	No	No	No	No	\$62,000,000
<a href="https://www.inx.co/">INX Digital</a>	<a href="https://www.inx.co/">https://www.inx.co/</a>	2017	United States	No	Yes	Yes	No	\$96,500,000
<a href="https://ownera.io/">Ownera</a>	<a href="https://ownera.io/">https://ownera.io/</a>	2018	United Kingdom	Yes	No	Yes	No	\$20,000,000
<a href="https://paxos.com/">Paxos</a>	<a href="https://paxos.com/">https://paxos.com/</a>	2012	United States	No	Yes	No	Yes	\$543,500,000
<a href="https://polymath.network/">Polymath</a>	<a href="https://polymath.network/">https://polymath.network/</a>	2017	Barbados	Yes	Yes	Yes	Yes	\$58,700,000
<a href="https://www.pontoro.com/">Pontoro</a>	<a href="https://www.pontoro.com/">https://www.pontoro.com/</a>	2015	United States	No	No	Yes	No	\$10,000,000
<a href="https://www.riddleandcode.com/">Riddle&amp;Code</a>	<a href="https://www.riddleandcode.com/">https://www.riddleandcode.com/</a>	2016	Austria	Yes	No	No	Yes	n/a
<a href="https://www.seba.swiss/">SEBA Bank</a>	<a href="https://www.seba.swiss/">https://www.seba.swiss/</a>	2018	Switzerland	No	No	No	Yes	\$119,000,000
<a href="https://securitize.io/">Securitize</a>	<a href="https://securitize.io/">https://securitize.io/</a>	2017	United States	No	Yes	Yes	No	\$100,200,000
<a href="https://securrency.com/">Securrency</a>	<a href="https://securrency.com/">https://securrency.com/</a>	2015	United States	No	Yes	Yes	No	\$64,500,000
<a href="https://stobox.io/">Stobox</a>	<a href="https://stobox.io/">https://stobox.io/</a>	2018	United States	No	Yes	Yes	No	\$1,200,000

Entity	Website	Founded	Jurisdiction	In-House Blockchain	Tokenized Asset Marketplace	Fractionalization of Assets	Self-Custody	Total Funding
<a href="#">STOKR</a>	<a href="https://stokr.io/">https://stokr.io/</a>	2018	Luxembourg	No	Yes	Yes	No	\$4,700,000
<a href="#">Taurus Platform</a>	<a href="https://www.taurushq.com/">https://www.taurushq.com/</a>	2018	Geneva	No	Yes	No	Yes	-
<a href="#">Texture Capital</a>	<a href="https://www.texture.capital/">https://www.texture.capital/</a>	2019	United States	No	Yes	No	Yes	\$1,000,000
<a href="#">Tokeny Solutions</a>	<a href="https://tokeny.com/">https://tokeny.com/</a>	2017	Luxembourg	No	Yes	Yes	Yes	\$5,660,000
<a href="#">TOKO</a>	<a href="https://toko.network/">https://toko.network/</a>	2022	Hong Kong	No	No	Yes	No	-
<a href="#">tZERO</a>	<a href="https://www.tzero.com/">https://www.tzero.com/</a>	2014	United States	No	Yes	Yes	No	\$275,000,000
<a href="#">Vertalo</a>	<a href="https://www.vertalo.com/">https://www.vertalo.com/</a>	2017	United States	No	No	No	No	Undisclosed
<a href="#">WeOwn</a>	<a href="https://weown.com/en/">https://weown.com/en/</a>	2017	Liechtenstein	Yes	Yes	Yes	Yes	Undisclosed

Data as of 17 April 2023

## Key Takeaways

- 13 of the listed organizations are registered in the US, followed by the United Kingdom with 3 projects and Luxembourg with 2 projects.
- Only 5 organizations utilize an in-house blockchain network.
- 3 of the organizations have their own tokenized asset marketplace.
- 16 organizations support the fractionalization of real-world assets.

## CeFi RWA Asset Classes

The table below displays the types of underlying assets tokenized by the selected protocols.

Entity	Real Estate	Equities	Commodities	Fixed Income	Private Credit	Forex	Other (Art, Luxury, etc.)
10XTS	✓						✓
AlphaPoint	✓	✓	✓				✓
Archax		✓					
Bankex	✓				✓		✓
Enigma Vault							✓
Fnality International						✓	
INX Digital		✓					
Ownera	✓	✓		✓	✓		
Paxos		✓	✓			✓	
Polymath	✓						
Pontoro					✓		
Riddle & Code	✓						✓
SEBA Bank						✓	
Securitize	✓	✓					
Securrency		✓		✓			
Stobox	✓	✓	✓				✓
STOKR		✓					✓
Taurus Platform	✓						
Texture Capital	✓				✓		
Tokeny Solutions	✓	✓			✓		
TOKO	✓	✓					✓

tZERO		✓					
Vertalo	✓	✓					
WeOwn		✓		✓	✓		

## Key Takeaways

- The most common tokenized asset types are equities (14) and real estate (13).
- Tokenization of luxury goods and private credit is another popular trend, with 12 and 11 platforms, respectively, providing these services.

## DeFi RWA Industry Players

The table provides details on a selection of 33 on-chain tokenization providers.

Entity	Blockchain(s)	Sector	Asset Class(es)	Founding Year	Geography/Jurisdiction
<a href="#">AmFi</a>	Avalanche	Credit	Real Estate, Credit & Loans	2022	United States
<a href="#">Arca US Treasury Fund</a>	Ethereum	Fund	Fixed Income	2020	United States
<a href="#">Arf</a>	Stellar	Credit	Credit & Loans	2019	Switzerland
<a href="#">Backed Finance</a>	Ethereum, Gnosis	Tokenization	Equities, Credit	2021	Switzerland
<a href="#">Bluejay Finance</a>	Ethereum	Stablecoin Credit	Fixed Income	2021	Singapore
<a href="#">Canza Finance</a>	Avalanche, Celo	Stablecoin Credit	Credit & Loans	2020	Nigeria
<a href="#">Carapace Finance</a>	Ethereum	Credit	Credit	2021	Unknown
<a href="#">Centrifuge</a>	Ethereum	Credit	Credit & Loans, Real Estate	2017	Switzerland
<a href="#">Cerchia</a>	Avalanche	Credit	Insurance	2020	Switzerland
<a href="#">CitaDAO</a>	Ethereum	Tokenization	Real Estate	2021	Unknown
<a href="#">Clearpool</a>	Ethereum, Polygon	Credit	Credit & Loans	2021	Hong Kong
<a href="#">Dexstar</a>	Ethereum	Credit	Credit & Loans	2021	Cayman Islands
<a href="#">DEFYCA</a>	Avalanche	Tokenization	Fiat, Credit & Loans	2021	Luxembourg
<a href="#">Fabrica</a>	Ethereum	Derivatives	Real Estate	2019	United States



Entity	Blockchain(s)	Sector	Asset Class(es)	Founding Year	Geography/Jurisdiction
<a href="#">Florence Finance</a>	Ethereum	Credit	Credit & Loans	-	United Arab Emirates
<a href="#">Frigg</a>	Ethereum	Credit	Credit & Loans	2022	Switzerland
<a href="#">Goldfinch</a>	Ethereum	Credit	Credit & Loans	2020	United States
<a href="#">Homecoin</a>	Ethereum	Stablecoin	Mortgages	-	Unknown
<a href="#">HoneyBricks</a>	Polygon	Tokenization	Real Estate	2022	United States
<a href="#">Jia</a>	Ethereum, Polygon	Credit	Credit & Loans	2022	United States
<a href="#">LandX</a>	Ethereum	Credit	Credit & Loans	-	Lithuania
<a href="#">Maker</a>	Ethereum	Stablecoin Credit	Credit & Loans, Cryptocurrencies	2015	Denmark
<a href="#">Maple</a>	Ethereum, Solana	Credit	Credit & Loans	2020	Australia
<a href="#">Maxos</a>	Ethereum	Stablecoin Credit	Credit & Loans	2020	United States
<a href="#">Obligate</a>	Polygon	Credit	Credit & Loans	2019	Switzerland
<a href="#">Ondo Finance</a>	Ethereum	Tokenization	Credit & Loans	2021	United States
<a href="#">Parcl</a>	Solana	Derivatives	Real Estate	2022	British Virgin Islands
<a href="#">Polytrade Finance</a>	Polygon	Credit	Credit & Loans	2021	United Arab Emirates
<a href="#">PurpleFi</a>	-	Tokenization	Real Estate	2022	United Kingdom
<a href="#">Ribbon Lend</a>	Ethereum	Credit	Credit & Loans	2020	Singapore
<a href="#">Sapling</a>	Polygon	Credit	Credit & Loans	2022	United Kingdom
<a href="#">Tangible</a>	Polygon	Stablecoin	Real Estate, Precious Metals,	2021	United States

Entity	Blockchain(s)	Sector	Asset Class(es)	Founding Year	Geography/Jurisdiction
			Luxury Goods,		
<a href="#">TrueFi</a>	Ethereum	Credit	Credit & Loans	2020	United States

## Key Takeaways

- As of April 2023, Credit & Loans is the most common sector for DeFi tokenization products with a total of 14 platforms supporting real-world loans.
- Ethereum is the most common blockchain among RWA DeFi applications, with 22 out of 33 platforms being run on its network.
- A smaller portion of the RWA DeFi applications run on the Polygon, Solana, Avalanche, Celo, Stellar, BNB Smart Chain, and Gnosis Chain blockchains.

## DeFi RWA Protocols

The following table provides details on DeFi protocols that integrate real-world assets. These range from on-chain emerging markets lenders to protocols providing on-chain market participants with access to US Treasury Bills.

Protocol	Network	Total Lifetime Loans	Active Loans	Total Value Locked (TVL)	Month over Month Change in TVL (%)	Market Capitalization of Protocol's Native Token	Month over Month Change in Market Capitalization (%) of Protocol's Native Token
<a href="#">Centrifuge</a>	Ethereum	\$343,632,211	\$189,145,705	\$1,776,732	↓-10.97%	\$98,491,440	↑7.57%
<a href="#">Maple</a>	Ethereum	\$1,815,656,926	\$140,619,727	\$1,890,953	↓-28.5%	\$21,690,000	↓-40.57%
<a href="#">Goldfinch</a>	Ethereum	\$113,029,773	\$103,754,399	\$1,619,269	↓-6.36%	\$18,513,862	↓-92.23%
<a href="#">Ondo Finance</a>	Ethereum	N/A	\$43,380,000	\$101,890,000	↑53.2%	N/A	N/A
<a href="#">Credix</a>	Solana	\$35,458,286	\$32,708,286	\$177,460	↑181.8%	N/A	N/A
<a href="#">TrueFi</a>	Ethereum	\$1,736,195,553	\$19,647,119	\$1,899,298	↓-11.69%	\$1,899,298	↓-26.94%
<a href="#">Clearpool</a>	Ethereum	\$147,610,074	\$6,339,194	\$1,464,566	↑49.8%	N/A	N/A
<a href="#">HomeCoin</a>	Ethereum	\$7,955,966	\$6,160,577	N/A	N/A	N/A	N/A
<a href="#">Clearpool</a>	Polygon	\$80,674,770	\$78,195	\$66,315	N/A	\$12,788,805	↓-39.41%
<a href="#">Ribbon Lend</a>	Ethereum	\$55,647,465	N/A	\$131,943	↓-95.5%	\$104,433,332	↓-12.32%
<a href="#">Maple</a>	Solana	N/A	N/A	\$17,340	N/A	N/A	N/A

Source: Digital Asset Research | Data period: 15 March 2023 - 15 April 2023

## Key Takeaways

- Five protocols saw their TVL decrease significantly in April, with Ribbon Lend experiencing the biggest decline of -95%.

- Maple Finance and TrueFi remain the biggest players in the sector, with other protocols including Centrifuge, Goldfinch, and Ondo Finance slowly catching up with the growing size of their active loans.
- Centrifuge has the largest active loans at approximately \$189M and the majority of these loans are structured credit pools supported by BlockTower capital.

## Closing Remarks

The landscape of RWA tokenization has expanded over the past few years. As blockchain technology scales and regulatory clarity develops, an increasing number of organizations are focusing their efforts on tokenization. Tokenization of RWAs offers an opportunity to increase the velocity of capital by improving transparency and settlement time through the immutability of digital assets and their ease of transfer.

Additionally, as the digital asset ecosystem matures, its economy will become increasingly interconnected with traditional real-world economies. Utilizing blockchain technology to enhance the trading infrastructure of traditional RWAs is a step toward this objective.

The symbiotic relationship between real-world assets and the digital asset industry is an essential element in the evolution of the world's capital markets. By embracing the strengths of blockchain technology, the velocity of capital may improve, thereby driving innovation and cultivating a more efficient and inclusive global economy.

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