

# Real-World Assets (RWAs) Tokenization Report - Q1 2024 Recap

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

Our report 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.

Information is compiled from Digital Asset Research's (DAR's) data sources, public sources, media reports, and press releases, and, while wide-ranging, this report 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 detailed in three 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** section.
- On-chain U.S. Treasury products, which include products from both CeFi and DeFi platforms, are detailed in the **RWA U.S. Treasury Protocols** section.

### **Significant RWA Tokenization News**

- BlackRock launched a tokenized fund, BUIDL, on the Ethereum blockchain.
- Citibank <u>tested</u> the tokenization of private equity funds on the Avalanche network.
- Goldman Sachs, BNY Mellon, and others <u>tested</u> an enterprise blockchain for tokenized assets.
- Russian President Vladimir Putin <u>signed</u> a law to use digital assets in international payments.
- The Hong Kong Monetary Authority (HKMA) <u>published</u> guidance on the sale and distribution of tokenized products.
- HKMA <u>announced</u> Project Ensemble to support the development of Hong Kong's tokenization market.
- A group of seven central banks <u>started</u> a tokenization project that aims to improve existing financial systems.
- Sygnum Bank <u>tokenized</u> \$50 million in assets in Fidelity International's money-market fund fund for Matter Labs, which was transferring its reserves to the blockchain.
- The BIS Innovation Hub, Swiss National Bank, and World Bank <u>introduced</u> Project Promissa to pilot the tokenization of financial instruments.
- Finoa, a crypto custodian, began offering Centrifuge's tokenized treasury bill fund to clients.
- GF Securities (Hong Kong) issued digitized bonds using ABT Tech Limited's RWA tokenization platform.
- Six Digital Exchange <u>issued</u> two CHF100 million digital bonds settling in wholesale central bank digital currency (wCDBC).
- UBS <u>launched</u> a tokenized warrant on the Ethereum blockchain in Hong Kong.
- Singapore's DigiFT introduced RWA tokens for U.S. Treasury bills.
- Oasis Pro <u>created</u> a token on the Avalanche C-Chain that represents a stake in the Diamond Standard Fund, which is a product sponsored by Diamond Standard Commodities and Horizon Kinetics.
- Meld, a crypto bank licensed in Lithuania, <u>plans</u> to offer tokenized RWAs to retail investors.
- Superstate <u>launched</u> a tokenized short-term treasury fund on Ethereum.
- SunMoney Solar Group <u>partnered</u> with DIONE Protocol for renewable energy tokenization.
- Coreestate.io <u>launched</u> a tokenized real estate project in Scandinavia.
- MANTRA Chain <u>raised</u> \$11 million to build a protocol for swapping tokenized real estate and other assets.
- Paxos integrated Chainlink's PayPal USD (PYUSD) price feed on the Ethereum mainnet.
- Libre, a tokenization firm backed by Brevan Howard, <u>went</u> live.
- Klaytn onboarded Goldstation and \$GPC, marking the launch of a gold RWA DeFi platform outside Ethereum.

- Ondo's USDY token, which is backed by short-term U.S. treasuries and bank deposits, was introduced on Aptos.
- KASU <u>raised</u> \$3 million for an RWA lending platform.
- PV01 tokenized a \$5M U.S. Treasury Bill.
- Homium <u>launched</u> tokenized home equity loans on the Avalanche blockchain.

## **CeFi RWA Industry Players**

The table below provides details on a selection of 92 centralized tokenization service providers.

| Entity                   | Website  | Founded | Jurisdiction   | In-House<br>Blockchain | Tokenized<br>Asset<br>Marketplace | Fractionalization<br>of Assets | Self-Custody | Total Funding |
|--------------------------|--|---------|----------------|------------------------|-----------------------------------|--------------------------------|--------------|---------------|
| 10XTS                    | https://10xts.com/                                     | 2017    | United States  | Yes                    | No                                | Yes                            | Yes          | \$2,400,000   |
| ADDX                     | https://addx.co/en/index.html                          | 2017    | Singapore      | No                     | Yes                               | Yes                            | No           | \$140,900,000 |
| Ainslie Crypto           | https://ainsliecrypto.com.au/                          | 1974    | Australia      | No                     | Yes                               | Yes                            | Yes          | Unknown       |
| Aktionariat              | https://www.aktionariat.com/                           | 2020    | Switzerland    | No                     | Yes                               | No                             | No           | \$1,500,000   |
| AllianceBlock            | https://allianceblock.io/                              | 2018    | Netherlands    | No                     | Yes                               | No                             | Yes          | \$1,500,000   |
| Alphaledger              | https://www.alphaledger.com/                           | 2019    | United States  | No                     | Yes                               | No                             | No           | \$7,500,000   |
| AlphaPoint               | https://alphapoint.com/                                | 2013    | United States  | Yes                    | No                                | Yes                            | Yes          | \$23,200,000  |
| Arca US Treasury<br>Fund | https://invest.arcalabs.com/#/log<br>in?redirect=/home | 2020    | United States  | No                     | No                                | Yes                            | No           | \$10,000,000  |
| Archax                   | https://www.archax.com/                                | 2018    | United Kingdom | No                     | Yes                               | Yes                            | Yes          | \$41,600,000  |
| Arf                      | https://arf.one/                                       | 2019    | Switzerland    | No                     | No                                | No                             | No           | \$14,100,000  |
| Bankex                   | https://bankex.com/                                    | 2015    | United States  | No                     | No                                | Yes                            | Yes          | \$18,100,000  |
| Blocksquare              | https://blocksquare.io/                                | 2017    | Slovenia       | No                     | Yes                               | Yes                            | No           | Unknown       |
| Bondblox                 | https://bondblox.com/                                  | 2016    | Singapore      | No                     | Yes                               | Yes                            | No           | \$6,000,000   |
| Brale                    | https://brale.xyz/                                     | 2022    | United States  | No                     | No                                | No                             | No           | \$11,100,000  |
| Brickken                 | https://www.brickken.com/                              | 2020    | Spain          | No                     | Yes                               | Yes                            | No           | \$2,700,000   |

| Entity                | Website                         | Founded | Jurisdiction            | In-House<br>Blockchain | Tokenized<br>Asset<br>Marketplace | Fractionalization<br>of Assets | Self-Custody | Total Funding |
|-----------------------|---------------------------------|---------|-------------------------|------------------------|-----------------------------------|--------------------------------|--------------|---------------|
| Brightvine            | https://www.brightvine.com/     | 2020    | United States           | No                     | Yes                               | Yes                            | No           | Unknown       |
| Bru Finance           | https://bru.finance/            | 2022    | India                   | No                     | Yes                               | Yes                            | Yes          | Unknown       |
| BSOS                  | https://www.bsos.co/suplex      | 2018    | Taiwan                  | Yes                    | Yes                               | Yes                            | No           | Unknown       |
| Canton Network        | https://www.canton.network/     | 2023    | United States           | Yes                    | No                                | No                             | No           | Unknown       |
| Cerchia               | https://www.cerchia.io/         | 2020    | Switzerland             | No                     | Yes                               | No                             | No           | \$2,700,000   |
| Circle*               | https://circle.com/             | 2013    | United States           | No                     | No                                | No                             | No           | \$950,000,000 |
| Comtech Gold*         | https://comtechgold.com/        | 2022    | Dubai                   | No                     | Yes                               | No                             | Yes          | Unknown       |
| dclex                 | https://dclex.com/              | -       | Canada                  | No                     | Yes                               | No                             | No           | Unknown       |
| DigiFT                | https://www.digift.sg/          | 2021    | Singapore               | No                     | Yes                               | Yes                            | No           | \$10,500,000  |
| DigiShares            | https://digishares.io/          | 2018    | Denmark                 | No                     | Yes                               | Yes                            | No           | \$2,000,000   |
| Ebric                 | https://ebric.io/               | 2020    | Singapore               | No                     | Yes                               | Yes                            | No           | Unknown       |
| Ekta                  | https://ektarealestate.app/     | 2021    | Indonesia               | Yes                    | Yes                               | Yes                            | No           | \$67,100,000  |
| Enigma Vault          | https://www.enigmavault.io/     | 2020    | United States           | No                     | No                                | No                             | Yes          | Unknown       |
| eNor                  | https://enorsecurities.com/en/  | 2021    | El Savador              | No                     | Yes                               | Yes                            | Yes          | Unknown       |
| Estate Protocol       | https://www.estateprotocol.com/ | 2021    | United Arab<br>Emirates | No                     | Yes                               | Yes                            | No           | \$1,000,000   |
| Flowcarbon            | https://www.flowcarbon.com/     | 2021    | United States           | No                     | No                                | No                             | No           | \$1,573,001   |
| Fnality International | https://www.fnality.org/home    | 2019    | United Kingdom          | Yes                    | No                                | No                             | No           | \$62,000,000  |
| Fortunafi             | https://www.fortunafi.com/      | 2020    | United States           | No                     | Yes                               | Yes                            | No           | \$6,350,000   |

| Entity             | Website  | Founded | Jurisdiction   | In-House<br>Blockchain | Tokenized<br>Asset<br>Marketplace | Fractionalization<br>of Assets | Self-Custody | Total Funding |
|--------------------|--|---------|----------------|------------------------|-----------------------------------|--------------------------------|--------------|---------------|
| Franklin Templeton | https://www.franklintempleton.com/investments/options/money-market-funds/products/29386/SINGLCLASS/franklin-on-chain-u-s-qovernment-money-fund/FOBXX | 1947    | United States  | No                     | No                                | Yes                            | No           | Unknown       |
| Frictionless       | https://www.frictionless.markets/  | 2022    | Luxembourg     | No                     | No                                | No                             | No           | Unknown       |
| Fusang             | https://www.fusang.co/   | 2015    | Hong Kong      | Yes                    | Yes                               | Yes                            | Yes          | \$7,500,000   |
| Groma              | https://www.groma.com/   | 2020    | United States  | No                     | No                                | Yes                            | No           | \$49,300,000  |
| Hamsa Pay          | https://www.hamsa.com/   | 2020    | United States  | No                     | Yes                               | Yes                            | No           | \$5,700,000   |
| Hashnote           | https://www.hashnote.com/  | 2022    | United States  | No                     | No                                | No                             | No           | \$5,000,000   |
| Helix              | https://helixfinance.io/   | 2023    | Singapore      | No                     | No                                | Yes                            | No           | \$2,000,000   |
| Homium*            | https://www.homium.io/   | 2018    | United States  | No                     | No                                | Yes                            | No           | \$14,900,000  |
| HoneyBricks        | https://www.honeybricks.com/   | 2020    | United States  | No                     | Yes                               | Yes                            | Yes          | Unknown       |
| HouseAfrica        | https://houseafrica.io/  | 2017    | Nigeria        | No                     | Yes                               | Yes                            | No           | \$525,000     |
| Intain             | https://intainft.com/  | 2018    | United States  | No                     | Yes                               | Yes                            | Yes          | \$1,500,000   |
| INX Digital        | https://www.inx.co/  | 2017    | United States  | No                     | Yes                               | Yes                            | No           | \$101,700,000 |
| InvestaX           | https://investax.io/   | 2015    | Singapore      | No                     | Yes                               | Yes                            | Yes          | \$150,000     |
| Jia                | https://www.jia.xyz/   | 2022    | United States  | No                     | Yes                               | Yes                            | No           | \$5,300,000   |
| Libre*             | https://www.librecapital.com/  | 2024    | United Kingdom | Yes                    | No                                | No                             | No           | Unknown       |
| Liquid Mortgage    | https://www.liquidmortgage.io/   | 2018    | United States  | No                     | Yes                               | Yes                            | No           | Unknown       |

| Entity            | Website                                | Founded | Jurisdiction   | In-House<br>Blockchain | Tokenized<br>Asset<br>Marketplace | Fractionalization<br>of Assets | Self-Custody | Total Funding |
|-------------------|--|---------|----------------|------------------------|-----------------------------------|--------------------------------|--------------|---------------|
| Lofty             | https://www.lofty.ai/                  | 2018    | United States  | No                     | Yes                               | Yes                            | No           | \$5,000,000   |
| Mercado Bitcoin*  | https://www.mercadobitcoin.co<br>m.br/ | 2013    | Brazil         | No                     | No                                | No                             | No           | \$238,000,000 |
| Mountain Protocol | https://mountainprotocol.com/          | 2023    | Bermuda        | No                     | No                                | No                             | No           | Unknown       |
| NYALA             | https://www.nyala.de/en/               | 2019    | Germany        | No                     | Yes                               | Yes                            | No           | Unknown       |
| OpenChrono*       | https://openchrono.io/en-gb            | 2022    | Germany        | No                     | Yes                               | No                             | No           | Unknown       |
| Ownera            | https://ownera.io/                     | 2018    | United Kingdom | Yes                    | No                                | Yes                            | No           | \$20,000,000  |
| Paxos             | https://paxos.com/                     | 2012    | United States  | No                     | Yes                               | No                             | Yes          | \$543,500,000 |
| PeerHive          | https://peerhive.app/                  | 2023    | Malaysia       | No                     | Yes                               | Yes                            | No           | Unknown       |
| Petale            | https://www.petale.com/                | 2018    | France         | Yes                    | Yes                               | Yes                            | No           | Unknown       |
| Polymath          | https://polymath.network/              | 2017    | Barbados       | Yes                    | Yes                               | Yes                            | No           | \$58,700,000  |
| Pontoro           | https://www.pontoro.com/               | 2015    | United States  | No                     | No                                | Yes                            | No           | \$10,000,000  |
| Propy             | https://propy.com/home/                | 2015    | United States  | No                     | Yes                               | Yes                            | No           | Unknown       |
| PV01              | https://www.pv0.one/                   | 2022    | United Kingdom | No                     | Yes                               | No                             | No           | \$9,000,000   |
| Realio Network    | https://realio.network/                | 2018    | United States  | Yes                    | Yes                               | No                             | Yes          | Unknown       |
| RealT             | https://realt.co/                      | 2019    | United States  | No                     | Yes                               | Yes                            | No           | \$10,200,000  |
| RealX             | https://www.realx.in/about-us          | 2017    | India          | No                     | No                                | Yes                            | No           | Unknown       |
| Riddle&Code       | https://www.riddleandcode.com/         | 2016    | Austria        | Yes                    | No                                | No                             | Yes          | Unknown       |
| Robinland         | https://www.robinland.io/              | 2021    | United States  | No                     | Yes                               | Yes                            | No           | \$2,000,000   |

| Entity                  | Website                        | Founded | Jurisdiction              | In-House<br>Blockchain | Tokenized<br>Asset<br>Marketplace | Fractionalization<br>of Assets | Self-Custody | Total Funding |
|-------------------------|--------------------------------|---------|---------------------------|------------------------|-----------------------------------|--------------------------------|--------------|---------------|
| SEBA Bank               | https://www.seba.swiss/        | 2018    | Switzerland               | No                     | Yes                               | No                             | Yes          | \$246,900,000 |
| Securitize              | https://securitize.io/         | 2017    | United States             | No                     | Yes                               | Yes                            | No           | \$100,200,000 |
| Securrency              | https://securrency.com/        | 2015    | United States             | No                     | Yes                               | Yes                            | No           | \$64,500,000  |
| Smart Token Labs        | https://smarttokenlabs.com/    | 2017    | Australia                 | No                     | No                                | No                             | Yes          | \$6,000,000   |
| Soil                    | https://soil.co/               | 2021    | Poland                    | No                     | Yes                               | Yes                            | No           | Unknown       |
| Spydra                  | https://www.spydra.app/        | 2021    | United States             | Yes                    | No                                | No                             | No           | \$18,300,000  |
| Stable*                 | https://withstable.com/        | 2021    | United States             | No                     | No                                | No                             | No           | Unknown       |
| Stobox                  | https://stobox.io/             | 2018    | United States             | No                     | Yes                               | Yes                            | No           | \$1,200,000   |
| STOKR                   | https://stokr.io/              | 2018    | Luxembourg                | No                     | Yes                               | Yes                            | No           | \$8,100,000   |
| Structure               | https://structure.fi/          | 2020    | British Virgin<br>Islands | No                     | Yes                               | No                             | No           | \$20,000,000  |
| Superstate              | https://superstate.co/         | 2023    | United States             | No                     | No                                | No                             | No           | \$4,000,000   |
| Taurus Platform         | https://www.taurushq.com/      | 2018    | Geneva                    | No                     | Yes                               | No                             | Yes          | \$75,900,000  |
| Talium Assets           | https://www.talium-assets.com/ | 2018    | France                    | No                     | Yes                               | Yes                            | No           | Unknown       |
| Tether*                 | https://tether.to/en/          | 2014    | British Virgin<br>Islands | No                     | No                                | No                             | No           | Unknown       |
| Texture Capital         | https://www.texture.capital/   | 2019    | United States             | No                     | Yes                               | Yes                            | No           | \$1,000,000   |
| <b>Tokeny Solutions</b> | https://tokeny.com/            | 2017    | Luxembourg                | No                     | Yes                               | Yes                            | Yes          | \$5,660,000   |
| токо                    | https://toko.network/          | 2022    | Hong Kong                 | No                     | No                                | Yes                            | No           | Unknown       |
| Tradable*               | https://www.tradable.xyz/      | 2022    | United States             | No                     | No                                | No                             | No           | \$2,000,000   |

| Entity        | Website  | Founded | Jurisdiction  | In-House<br>Blockchain | Tokenized<br>Asset<br>Marketplace | Fractionalization<br>of Assets | Self-Custody | Total Funding |
|---------------|--|---------|---------------|------------------------|-----------------------------------|--------------------------------|--------------|---------------|
| tZERO         | https://www.tzero.com/                                   | 2014    | United States | No                     | Yes                               | Yes                            | No           | \$275,000,000 |
| Vertalo       | https://www.vertalo.com/                                 | 2017    | United States | No                     | No                                | Yes                            | No           | \$7,800,000   |
| WeOwn         | https://weown.com/de/                                    | 2017    | Liechtenstein | Yes                    | Yes                               | Yes                            | Yes          | Unknown       |
| WisdomTree    | https://www.wisdomtree.com/in<br>vestments/digital-funds | 1985    | United States | No                     | Yes                               | Yes                            | No           | \$126,400,000 |
| Yieldteq      | https://www.yieldteq.io/                                 | 2023    | United States | No                     | No                                | No                             | No           | Unknown       |
| Zivoe Finance | https://zivoe.finance/                                   | 2020    | United States | No                     | No                                | Yes                            | No           | Unknown       |
| Zodor         | https://www.zodor.io/                                    | 2023    | India         | No                     | No                                | Yes                            | No           | Unknown       |

<sup>\*</sup>Newly added to the report

Data as of 1 April 2024

- 42 of the listed organizations are registered in the United States, followed by Singapore with 6 protocols, the United Kingdom with 5 protocols, Switzerland with 4 protocols, and India and Luxembourg with 3 protocols each.
- 9 new projects were added to this month's report:
  - o Circle is a financial technology company that issues USDC, a stablecoin pegged to the U.S. dollar.
  - Comtech Gold provides a platform to buy digital gold that is backed by physical gold stored securely with Transguard.
  - Homium manages real estate equity mortgages and acts as a platform for securitization in the real estate sector.
  - Libre is an institutional Web3 infrastructure platform for alternative investments that introduced a tokenized version of a BlackRock money-market fund.
  - Mercado Bitcoin is a cryptocurrency exchange that offers access to alternative investments like tokenized assets, such as high-yield public and private debt, FuteCoin, and carbon credits.

- o OpenChrono supports a Web3 community for watch consumers to buy, sell, and use luxury watches as collateral.
- o Stable issues USDLR, a stablecoin backed by fiat currency.
- o Tether is the issuer of USDT, a major stablecoin that aims to maintain a U.S. dollar peg.
- o Tradable enables users to invest in private credit funds.
- Only 15 organizations utilize an in-house blockchain network.
- 57 of the organizations have their own tokenized asset marketplace.
- 59 of the 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,<br>Environmental, etc.) |
|--------------------------|-------------|----------|-------------|--------------|----------------|-------|---|
| 10XTS                    | V           | <b>V</b> |             |              | ~              |       | <b>✓</b>                                    |
| ADDX                     | ~           | <b>V</b> |             |              | ~              |       |   |
| Ainslie Crypto           |             |          | ~           |              |                |       |   |
| Aktionariat              |             | <b>✓</b> |             |              |                |       |   |
| AllianceBlock            |             |          |             |              | ~              |       |   |
| Alphaledger              |             |          |             | <b>V</b>     |                |       |   |
| AlphaPoint               | ~           | <b>✓</b> | ~           |              |                |       | <b>V</b>                                    |
| Arca US Treasury<br>Fund |             |          |             | V            |                |       |   |
| Archax                   |             | <b>✓</b> |             | V            |                |       |   |
| Arf                      |             |          |             |              | ~              |       |   |
| Bankex                   | ~           |          |             |              | ~              |       | V   |
| Blocksquare              | ~           |          |             |              |                |       |   |
| Bondblox                 |             |          |             | V            |                |       |   |
| Brale                    |             |          |             | <b>V</b>     |                |       |   |
| Brickken                 |             | <b>~</b> |             |              |                |       |   |
| Brightvine               | ~           |          |             | <b>v</b>     |                |       |   |
| Bru Finance              |             |          | ~           | <b>v</b>     |                |       |   |
| BSOS                     |             |          |             |              | ~              |       |   |
| Canton Network           |             | <b>✓</b> | ~           | V            | ~              |       |   |
| Cerchia                  |             |          |             | V            | ~              |       |   |

| Entity                | Real Estate | Equities | Commodities | Fixed Income | Private Credit | Forex    | Other (Art, Luxury,<br>Environmental, etc.) |
|-----------------------|-------------|----------|-------------|--------------|----------------|----------|---|
| Circle*               |             |          |             |              |                |          | V   |
| Comtech Gold*         |             |          | V           |              |                |          |   |
| dclex                 |             | V        |             |              |                |          |   |
| DigiShares            | ~           |          |             |              |                |          |   |
| DigiFT                |             | <b>v</b> |             | V            |                |          |   |
| Ebric                 | ~           |          |             |              |                |          |   |
| Ekta                  | ~           |          |             |              |                |          |   |
| Enigma Vault          |             |          |             |              |                |          | V   |
| eNor                  | ~           | V        | V           | V            |                |          |   |
| Estate Protocol       | ~           |          |             |              |                |          |   |
| Flowcarbon            |             |          |             |              |                |          | V   |
| Fnality International |             |          |             |              |                | <b>✓</b> |   |
| Fortunafi             |             |          |             | V            | ~              |          |   |
| Franklin Templeton    |             |          |             | V            |                |          |   |
| Frictionless          |             | <b>v</b> |             |              |                |          |   |
| Fusang                |             | <b>v</b> |             |              | V              |          |   |
| Groma                 | ~           |          |             |              |                |          |   |
| Hamsa Pay             | ~           |          |             |              | ~              |          |   |
| Hashnote              |             | <b>v</b> |             | V            |                |          |   |
| Helix                 |             |          |             |              | ~              |          |   |
| Homium*               | ~           |          |             |              |                |          |   |
| HoneyBricks           | ~           |          |             |              |                |          |   |
| HouseAfrica           | ~           |          |             |              |                |          |   |
| Intain                |             |          |             |              | ~              |          |   |

| Entity            | Real Estate | Equities | Commodities | Fixed Income | Private Credit | Forex    | Other (Art, Luxury,<br>Environmental, etc.) |
|-------------------|-------------|----------|-------------|--------------|----------------|----------|---|
| INX Digital       |             | <b>V</b> |             |              |                |          |   |
| InvestaX          | ~           | <b>v</b> |             |              | ~              |          | <b>✓</b>                                    |
| Jia               |             |          |             |              | ~              |          |   |
| Libre*            |             |          |             | V            |                |          |   |
| Liquid Mortgage   | ~           |          |             |              | ~              |          |   |
| Lofty             | ~           |          |             |              |                |          |   |
| Mercado Bitcoin*  |             |          |             |              | ~              |          | <b>V</b>                                    |
| Mountain Protocol |             |          |             |              |                | <b>✓</b> |   |
| NYALA             | ~           |          |             | ~            |                |          |   |
| OpenChrono*       |             |          |             |              |                |          | V   |
| Ownera            | ~           | <b>✓</b> |             | ~            | V              |          |   |
| Paxos             |             | <b>✓</b> | ~           |              |                | <b>✓</b> |   |
| PeerHive          |             |          |             |              | ~              |          |   |
| Petale            | ~           | <b>✓</b> |             |              |                |          | V   |
| Polymath          | ~           | <b>✓</b> |             | V            |                |          |   |
| Pontoro           |             |          |             |              | ~              |          |   |
| Propy             | ~           |          |             |              |                |          |   |
| PV01              |             |          |             | ~            |                |          |   |
| Realio Network    | ~           |          |             |              |                |          |   |
| RealT             | ~           |          |             |              |                |          |   |
| RealX             | ~           |          |             |              |                |          |   |
| Riddle & Code     | ~           |          |             |              |                |          | <i>V</i>                                    |
| Robinland         | ~           |          |             |              |                |          |   |
| SEBA Bank         |             |          |             |              |                | <b>✓</b> |   |

| Entity           | Real Estate | Equities | Commodities | Fixed Income | Private Credit | Forex | Other (Art, Luxury,<br>Environmental, etc.) |
|------------------|-------------|----------|-------------|--------------|----------------|-------|---|
| Securitize       | V           | V        | ~           |              |                |       |   |
| Securrency       |             | V        |             | <b>V</b>     |                |       |   |
| Smart Token Labs |             |          |             |              |                |       | <b>V</b>                                    |
| Soil             |             |          |             | ~            | V              |       |   |
| Spydra           |             |          |             |              | ~              |       | <b>V</b>                                    |
| Stable*          |             |          |             |              |                |       | <b>V</b>                                    |
| Stobox           | ~           | <b>v</b> | ~           |              |                |       | <b>V</b>                                    |
| STOKR            |             | <b>v</b> |             | ~            |                |       | <b>V</b>                                    |
| Structure        |             | <b>v</b> |             |              |                |       |   |
| Superstate       |             |          |             | ~            |                |       |   |
| Taurus Platform  | V           |          |             |              |                |       | <b>V</b>                                    |
| Talium Assets    | V           | <b>v</b> | V           | ~            |                |       | V   |
| Tether*          |             |          |             |              |                |       | V   |
| Texture Capital  | V           | <b>v</b> |             | ~            | ~              |       |   |
| Tokeny Solutions | V           | V        | V           | ~            | ~              |       | V   |
| токо             | V           | V        |             |              |                |       | V   |
| Tradable*        |             |          |             |              | ~              |       |   |
| tZERO            |             | V        |             |              |                |       |   |
| Vertalo          | ~           | <b>✓</b> |             |              | ~              |       |   |
| WeOwn            |             | <b>✓</b> |             | ~            | ~              |       |   |
| WisdomTree       |             | ~        |             | ~            |                |       |   |
| Yieldteq         |             |          |             | ~            |                |       |   |
| Zivoe Finance    |             |          |             |              | ~              |       |   |
| Zodor            | ~           | V        | ~           |              | <i>'</i>       |       |   |

- As of April 2024, the most common tokenized asset types were real estate (38) and equities (32).
- Tokenization of private credit and fixed income are nearly as popular, with both offered by 29 platforms.
- Tokenization of foreign exchange and commodities-based assets remains the least popular among CeFi RWA providers.

## **DeFi RWA Industry Players**

The following table provides details on a selection of 56 on-chain tokenization providers. Unlike their CeFi counterparts, DeFi RWA providers are generally more permissionless, with a majority of operations conducted on the blockchain.

| Entity           | Blockchain(s)  | Sector            | Asset Class(es)                | Founding Year | Geography/Jurisdiction |
|------------------|--|-------------------|--------------------------------|---------------|------------------------|
| Aconomy          | Polygon  | Tokenization      | Luxury Goods                   | 2023          | -                      |
| AmFi             | Avalanche  | Credit            | Credit & Loans,<br>Real Estate | 2022          | United States          |
| <u>Alta</u>      | Ethereum, Polygon,<br>Optimism                         | Tokenization      | Real Estate,<br>Automotive     | 2020          | United States          |
| <u>Anzen</u>     | Ethereum   | Credit            | Credit & Loans                 | 2022          | United States          |
| Artrade*         | Solana   | Tokenization      | Artwork & NFTs                 | 2021          | France                 |
| <u>Atlendis</u>  | Polygon  | Credit            | Credit & Loans                 | 2021          | France                 |
| Backed Finance   | Ethereum, Gnosis                                       | Tokenization      | Credit & Loans,<br>Equities    | 2021          | Switzerland            |
| Bitbond          | Arbitrum, Avalanche,<br>Binance, Ethereum,<br>Optimism | Tokenization      | Fixed Income                   | 2013          | Germany                |
| Blockcellar      | Polygon  | Tokenization      | Luxury Goods                   | 2023          | Unknown                |
| Bluejay Finance  | Ethereum   | Stablecoin Credit | Fixed Income                   | 2021          | Singapore              |
| Canza Finance    | Avalanche, Celo  | Stablecoin Credit | Credit & Loans                 | 2020          | Nigeria                |
| Carapace Finance | Ethereum   | Credit            | Credit & Loans                 | 2021          | Unknown                |
| <u>CellarDAO</u> | Polygon  | Tokenization      | Luxury Goods                   | 2023          | Singapore              |

| Entity              | Blockchain(s)     | Sector       | Asset Class(es)                | Founding Year | Geography/Jurisdiction |  |
|---------------------|-------------------|--------------|--------------------------------|---------------|------------------------|--|
| <u>Centrifuge</u>   | Ethereum          | Credit       | Credit & Loans,<br>Real Estate | 2017          | Switzerland            |  |
| <u>CitaDAO</u>      | Ethereum          | Tokenization | Real Estate                    | 2021          | Singapore              |  |
| Clearpool           | Ethereum, Polygon | Credit       | Credit & Loans                 | 2021          | Hong Kong              |  |
| <u>CredeFi</u>      | Ethereum, Binance | Credit       | Credit & Loans                 | 2020          | Bulgaria               |  |
| <u>Credix</u>       | Solana            | Credit       | Credit & Loans                 | 2021          | Belgium                |  |
| Cogito Protocol     | Ethereum          | Tokenization | Fixed Income<br>Equities       | 2022          | United States          |  |
| <u>Defactor</u>     | Ethereum, Polygon | Credit       | Fixed Income<br>Credit & Loans | 2020          | Luxembourg             |  |
| Dexstar             | Ethereum          | Credit       | Credit & Loans                 | 2021          | Cayman Islands         |  |
| DEFYCA              | Avalanche         | Tokenization | Credit & Loans,<br>Fiat        | 2021          | Luxembourg             |  |
| Elysia              | Ethereum          | Tokenization | Real Estate                    | 2020          | Singapore              |  |
| Ensuro              | Ethereum          | Insurance    | Insurance Portfolio            | 2021          | Singapore              |  |
| <u>Fabrica</u>      | Ethereum          | Derivatives  | Real Estate                    | 2019          | United States          |  |
| Florence Finance    | Ethereum          | Credit       | Credit & Loans                 | -             | United Arab Emirates   |  |
| <u>Frigg</u>        | Ethereum          | Credit       | Credit & Loans                 | 2022          | Switzerland            |  |
| Goldfinch           | Ethereum          | Credit       | Credit & Loans                 | 2020          | United States          |  |
| <u>Homecoin</u>     | Ethereum          | Stablecoin   | Mortgages                      | -             | Unknown                |  |
| Huma Finance        | Polygon, Celo     | Credit       | Credit & Loans                 | 2022          | United States          |  |
| <u>impactMarket</u> | Celo              | Credit       | Credit & Loans                 | 2020          | Portugal               |  |

| Entity            | Blockchain(s)    | Sector            | Asset Class(es)                     | Founding Year | Geography/Jurisdiction |
|-------------------|------------------|-------------------|-------------------------------------|---------------|------------------------|
| KlimaDAO          | Polygon          | Tokenization      | Carbon Credit                       | 2021          | United States          |
| <u>LandX</u>      | Ethereum         | Credit            | Credit & Loans                      | -             | Lithuania              |
| <u>Maker</u>      | Ethereum         | Stablecoin Credit | Credit & Loans,<br>Cryptocurrencies | 2015          | Denmark                |
| <u>Maple</u>      | Ethereum, Solana | Credit            | Credit & Loans                      | 2020          | Australia              |
| <u>Matrixdock</u> | Ethereum         | Tokenization      | Fixed Income                        | -             | Singapore              |
| Maxos             | Ethereum         | Stablecoin Credit | Credit & Loans                      | 2020          | United States          |
| Meld Gold         | Algorand         | Commodities       | Gold                                | 2020          | Australia              |
| <u>Obligate</u>   | Polygon          | Credit            | Credit & Loans                      | 2019          | Switzerland            |
| Ondo Finance      | Ethereum         | Tokenization      | Credit & Loans                      | 2021          | United States          |
| <u>OpenEden</u>   | Ethereum         | Tokenization      | Fixed Income                        | 2022          | Singapore              |
| Parabol Finance   | Ethereum         | Tokenization      | Fixed Income                        | 2015          | United States          |
| Parci             | Solana           | Derivatives       | Real Estate                         | 2022          | British Virgin Islands |
| Pearl Exchange    | Polygon          | Infrastructure    | Stablecoins                         | 2023          | Unknown                |
| Polytrade Finance | Polygon          | Credit            | Credit & Loans                      | 2021          | United Arab Emirates   |
| <u>PurpleFi</u>   | -                | Tokenization      | Real Estate                         | 2022          | United Kingdom         |
| Ribbon Lend*      | Ethereum         | Stablecoin Credit | Credit & Loans                      | 2020          | Singapore              |
| Sapling           | Polygon          | Credit            | Credit & Loans                      | 2022          | United Kingdom         |
| Solv Finance      | Ethereum         | Tokenization      | Fixed Income                        | 2020          | British Virgin Islands |
| <u>Swarm</u> *    | Polygon          | Tokenization      | Securities                          | 2021          | Germany                |

| Entity                  | Blockchain(s) | Sector           | Asset Class(es)                                  | Founding Year | Geography/Jurisdiction |  |
|-------------------------|---------------|------------------|--|---------------|------------------------|--|
| Tangible                | Polygon       | Stablecoin       | Luxury Goods,<br>Precious Metals,<br>Real Estate | 2021          | United States          |  |
| Toucan Protocol         | Polygon, Celo | Tokenization     | Carbon Credit                                    | 2021          | Switzerland            |  |
| <u>Tribal Finance</u> * | Ethereum      | Credit           | Credit & Loans                                   | 2016          | United States          |  |
| <u>TrueFi</u>           | Ethereum      | Credit           | Credit & Loans                                   | 2020          | United States          |  |
| <u>Unikura</u>          | Ethereum      | Tokenization     | Trading cards, Watches, Luxury<br>Goods, and Art | 2023          | Japan and Singapore    |  |
| <u>Untangled</u>        | Celo          | Tokenized Credit | Private Credit Assets (Invoices and SME Loans)   | 2020          | United Kingdom         |  |

<sup>\*</sup>Newly added to the report

Data as of 1 April 2024

- 4 new protocols were added to our list of decentralized providers:
  - Artrade is an art platform powered by blockchain technology that lets creators sell their work and engage with their community.
  - Ribbon Lend provides a lending platform that allows depositors to lend to institutional borrowers who have been approved.
  - Swarm allows users to trade RWAs on-chain by providing infrastructure for token issuance, liquidity, and trading.
  - o Tribal Finance connects institutional investors and lending opportunities.
- As of this report, Credit & Loans is the most common sector for DeFi tokenization products, with a total of 30 providers supporting real-world loans.
- Ethereum is the most common blockchain among RWA DeFi applications, with 33 out of 56 providers being run on the blockchain.
- A smaller portion of the RWA DeFi applications run on the Polygon, Solana, Avalanche, Celo, 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  | Active Loans  | Total Lifetime<br>Loans | Total Value<br>Locked (TVL) | Market Capitalization<br>of Protocol's Native<br>Token | Quarterly Change in Market<br>Capitalization (%) of Protocol's<br>Native Token |
|-------------------|----------|---------------|-------------------------|-----------------------------|--|--|
| <u>Centrifuge</u> | Ethereum | \$277,359,312 | \$558,552,634           | \$271,371,784               | \$421,296,683  | 27.09%   |
| Maple             | Ethereum | \$174,299,957 | \$3,580,000,000         | \$131,410,000               | \$153,108,144  | 38.39%   |
| Goldfinch         | Ethereum | \$99,470,695  | \$112,989,772           | \$2,650,000                 | \$306,710,272  | 269.61%  |
| Credix            | Solana   | \$33,185,576  | \$42,371,385            | \$28,300,000                | N/A  | N/A  |
| <u>TrueFi</u>     | Ethereum | \$19,002,202  | \$1,740,000,000         | \$21,690,000                | \$154,272,633  | 131.27%  |
| <u>HomeCoin</u>   | Ethereum | \$6,101,113   | \$7,955,966             | \$6,296,638                 | N/A  | N/A  |
| Ondo Finance      | Ethereum | N/A           | N/A                     | \$221,470,000               | \$1,411,485,084  | N/A  |
| Ribbon Lend       | Ethereum | Unknown       | \$55,647,465            | N/A                         | \$1,653,119,922  | N/A  |

Data as of 1 April 2024

Data is sourced from project websites or other publicly available information.

- All protocols saw the market cap of their native tokens increase over the past quarter.
- The market capitalization of Goldfinch's native token increased from \$82,981,439 to \$306,710,272 in Q1 2024, an increase of 269.61%.

## **RWA U.S. Treasury Protocols**

| Protocol                                   | Network  | Ticker          | Name   | Market<br>Capitalization | Quarterly Change<br>in Market<br>Capitalization | Yield To<br>Maturity | Minimum<br>Investment |
|--|----------|-----------------|--|--------------------------|---|----------------------|-----------------------|
| Backed Finance                             | Ethereum | bIB01           | Backed IBTA \$ Treasury Bond<br>0-1yr                            | \$29,803,445             | -36.32%   | 5.23%                | \$5,000               |
| Franklin<br>Templeton Benji<br>Investments | Stellar  | FOBXX           | Franklin OnChain U.S. \$363,355,117 12.34% Government Money Fund |                          | 5.11%   | \$0                  |                       |
| Hashnote                                   | Ethereum | USYC            | Hashnote Short Duration Yield \$40,762,040 -10.01%               |                          | 4.70%   | \$100,000            |                       |
| Maple                                      | Ethereum | MPLcashUSDC     | Cash Management Pool (USDC)                                      | \$17,616,556             | 19.44%  | 5.06%                | \$100,000             |
| Maple                                      | Solana   | MPLcashUSDC-SPL | Cash Management Pool<br>(USDC-SPL)                               | \$8,381,215              | -34.43%   | 4.80%                | \$100,000             |
| Matrixdock                                 | Ethereum | STBT            | Short-term Treasury Bill Token                                   | \$42,337,819             | -60.19%   | 4.86%                | -                     |
| Ondo Finance                               | Ethereum | OUSG            | Ondo Short-Term US<br>Government Bond Fund                       | \$88,380,753             | -33.64%   | 4.68%                | \$100,000             |
| Open Eden                                  | Ethereum | TBILL           | OpenEden TBILL Vault   | \$21,904,957             | -1.34%  | 5.30%                | \$100,000             |
| WisdomTree                                 | Stellar  | WTSYX           | WisdomTree Short-Term<br>Treasury Digital Fund                   | \$1,003,526              | -90.70%   | 4.87%                | \$25                  |

Data as of 1 April 2024

Data is sourced from project websites or other publicly available information.

- Most treasury tokenization providers recorded a decrease in market capitalization in Q1 2024, while Franklin Templeton Benji Investments and Maple on Ethereum recorded increases.
- The largest percentage decline in market capitalization was experienced by WisdomTree Stellar (WTSYX), with

- a decrease of ~90%. Meanwhile, Matrixdock (STBT) saw the most significant decrease in market cap value, declining by \$64 million in Q1 2024.
- Franklin Templeton Benji Investments maintains its position as the market cap leader, with a total of \$363,355,117 as of 1 April 2024.

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