PHAROS
RESEARCH

The RWA Revolution: Landscape and Investment Opportunities

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Abstract

The tokenization of Real World Assets (RWA) has become the core narrative of the current crypto cycle, aiming to bring hundreds of trillions of dollars in traditional financial assets on-chain to build the next-generation financial infrastructure connecting the real economy with Decentralized Finance (DeFi). Despite its immense market potential (Boston Consulting Group predicts a market size of up to $16 trillion by 2030), its development still faces three major structural bottlenecks: regulatory compliance, asset mapping, and secondary market liquidity.

As of the end of August 2025, the global market size of non-stablecoin RWA was approximately $28 billion, a year-over-year increase of 114%. The market structure is dominated by credit-based assets, with Private Credit holding an absolute dominant position at a scale of $16 billion (approximately 56%), followed by U.S. Treasuries ($7.5 billion) and commodities ($2.4 billion). Among these, Ethereum is currently the primary network for hosting RWA.

This report provides an in-depth analysis of three core sectors:

- Private Credit: As the largest RWA sector by volume, its core value lies in enhancing the efficiency and transparency of traditional credit processes. However, pre-loan due diligence, risk control, and default resolution for these assets remain highly dependent on off-chain legal frameworks. The market is transitioning from an early exploratory phase to a stage of institutional diversification, represented by players like Maple and Figure.
- Commodities: The market is a duopoly dominated by the gold tokens PAXG and XAUT, which together account for over 75% of the market share. Liquidity in this sector is primarily concentrated on centralized exchanges, with very low integration into the DeFi ecosystem. Future growth will likely come from the diversification of issuers and underlying assets (such as agricultural products).
- Stocks: This sector is still in its nascent stages, with a total market capitalization (approximately $360 million) that is negligible compared to traditional stock markets and suffers from severe liquidity shortages, yet it holds enormous growth potential. The market is evolving along two paths: one is the "walled garden" model, represented by Robinhood, which prioritizes high compliance at the expense of composability; the other is the "open financial bridge" model, represented by xStocks, which aims for deep integration with DeFi. The entry of giants like Ondo Finance, which hold a full set of regulatory licenses, signals that competition in this sector is set to intensify.

Conclusion: The RWA industry is transitioning from a technology-driven "first half" to a "second half" defined by institutional demand and regulatory compliance. Its long-term value lies not in short-term speculation, but in the steady growth of on-chain asset scale, the effective deepening of secondary market liquidity, and the solid strengthening of legal and technical frameworks. RWA will build the next-generation financial infrastructure connecting real-world value with the on-chain world, powerfully promoting the construction of a new global financial model that is more transparent, efficient, and inclusive.

Keywords: RWA; Tokenization; Regulatory Compliance; Financial Infrastructure

01 / Introduction

The growth model of the crypto market is undergoing a profound evolution, with its focus gradually shifting from cycles driven by internal liquidity to seeking new value anchors deeply tied to the real economy. Against this backdrop, the tokenization of Real World Assets (RWA), as a critical bridge connecting the digital world with traditional finance, has emerged as the most central narrative of the current cycle. It not only opens up a vast channel for the on-chain world to draw value from the real world but also provides a path for the hundreds of trillions of dollars in massive existing assets in traditional finance to migrate towards greater efficiency and stronger liquidity through digitalization. RWA is essentially the key "connector" for building the next-generation financial market, and its level of maturity will directly determine whether blockchain technology can evolve from a closed, crypto-native cycle to a broad future integrated with the global economy.

Although institutions like the Boston Consulting Group (BCG) predict a potential market space of over ten trillion dollars[1] for RWA, this path of "bringing assets on-chain" is by no means a smooth one. To move from a grand vision to real-world business practice, RWA must overcome three major structural hurdles: regulatory compliance, asset mapping, and market liquidity. How to ensure the legal alignment between on-chain tokens and off-chain rights? How to create effective secondary market liquidity while maintaining compliance? These are the fundamental challenges that industry participants are striving to overcome.

To provide a comprehensive view of this complex and dynamic field, this report will conduct a systematic analysis from a macro to a micro perspective. The report will first outline the overall landscape of the RWA industry, including its market size, growth drivers, and core bottlenecks. Subsequently, it will focus on the three fastest-growing core sectors today—Private Credit, Commodities, and Stocks—providing an in-depth analysis of the market structure, operational models, and leading players in each. Through this report, we aim to offer readers a clear blueprint of the current landscape, future trends, and potential opportunities in RWA.

02 / Industry Overview and General Trends

2.1 Definition of RWA

Real World Assets (RWA) refers to the process of converting various off-chain, real-world assets with economic value into on-chain, tradable digital tokens through methods such as issuance, mapping, collateralization, or fractionalization. Its core logic is to leverage smart contracts and open finance protocols to achieve efficient utilization, transparent operation, and flexible composability of assets on the blockchain.

Currently, the scope of RWA is already quite extensive, covering nearly all major categories of traditional financial and physical assets. From government and corporate bonds to commodities, real estate, equity securities, and even art and intellectual property, all can be represented on-chain to enable confirmation of rights, fractionalization, and trading.

RWA Classification Table

Asset Category	Description	Examples
Bonds	Bringing government or corporate bonds on-chain as digital certificates to facilitate fractionalization, circulation, and settlement.	U.S. Treasuries, Corporate Bonds
Commodities	Commodity assets anchored by physical goods or compliant certificates, typically requiring custody and auditing before being brought on-chain.	Gold, Silver, Copper, Platinum, Carbon Credits
Receivables	Pooling verifiable future cash flows (debt/contract receivables) on-chain for distribution according to repayment schedules.	Accounts Receivable, Prepaid Orders
Real Estate	Fractionalizing real estate ownership or income rights into digital certificates to enable partial ownership.	Commercial Real Estate, Residential Communities, Industrial Parks
Equity & Securities	Mapping and transferring shares of stocks (or funds) on-chain in permissioned markets.	Private Equity, Publicly Traded Stocks
Art & Collectibles	Bringing ownership or economic rights of art/collectibles on-chain, allowing for fractional ownership and secondary trading.	Antiques, Calligraphy, Paintings, Luxury Goods
Intellectual Property	Digitizing IP assets such as copyrights, patents, and trademarks for licensing, transfer, or financing.	Music Copyrights, Film & TV Copyrights, Patent Licensing

Source: Pharos Research

The advantages of bringing RWA on-chain are primarily reflected in three aspects: liquidity, transparency, and cost efficiency. On one hand, on-chain representation can enhance the global circulation and settlement efficiency of assets while significantly reducing costs associated with intermediaries. On the other hand, the traceability of the blockchain and smart contract mechanisms

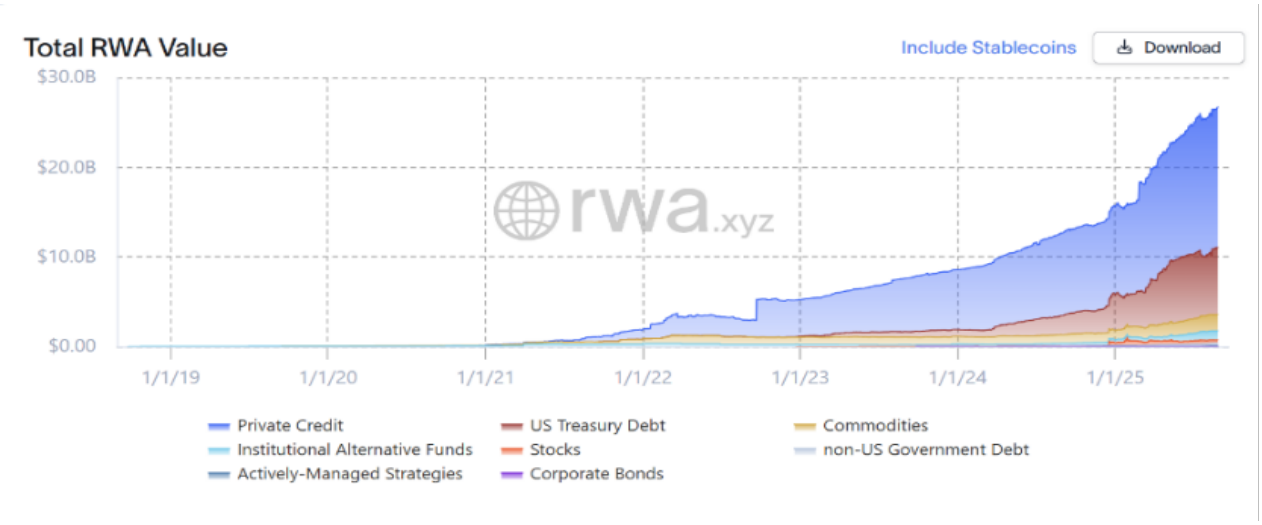
make asset trading and management more open and transparent. Furthermore, once on-chain, RWA can be deeply integrated with the Decentralized Finance (DeFi) ecosystem, creating new use cases and revenue models, which has given rise to the concept of "RWAfi".

It is worth noting that some RWA products have already achieved breakthrough applications, providing investors with access to asset classes that are difficult to reach in traditional markets. For example, Goldfinch's Private Debt FoF product has underlying assets consisting of private debt from large funds like Ares. In the traditional financial system, such products have extremely high investment thresholds, whereas on the Goldfinch platform, investors can participate with as little as $100. Similarly, products like USDY, which are backed by U.S. Treasuries, effectively solve the problem for investors in some countries who face compliance restrictions when trying to purchase U.S. Treasuries directly.

2.2 Market Size and Growth Potential

2.2.1 Market Size

As of the end of August 2025, the total global on-chain non-stablecoin RWA market size was approximately $28 billion, with a year-over-year growth rate of nearly 114% and a compound annual growth rate (CAGR) of about 111% over the past three years. Credit-based RWAs, represented by U.S. Treasuries and private credit, are the main drivers, with three-year CAGRs of 1523% and 104%, respectively.



Source:PharosResearch,RWA.xyz

In terms of on-chain distribution, Ethereum remains the core platform for RWA, accounting for about 53.3% of the market share with a managed value of $8.31 billion. ZKsync Era ranks second, with a market share of 15.4% and a value of approximately $2.4 billion.

RWA Asset Category Summary Table

RWA Asset Category	Overall Size	Mainstream Projects	Avg. APY	Open for Secondary Trading
Stablecoins	$270.14bn	USDT/USDC/USDS/USDe, etc.	0%～10%	Freely tradable
Private Credit	$16.01bn	Primarily focuses on high-yield assets from traditional finance such as corporate credit, accounts receivable, and structured debt. Mainstream projects include Figure Protocols, Centrifuge, Maple, TrueFi.	～10%	Trading within a whitelist after KYC / Trading not supported
U.S. Treasury / Money Market Funds	$7.45bn	BUIDL (size $2.39bn), with underlying assets being short-term U.S. Treasuries / Treasury reverse repos.	～4%	Freely tradable / Trading within a whitelist after KYC
Commodities	$2.36bn	PAXG (size $0.95bn), XAUT (size $0.83bn). The two account for 75% of the sector's total size. The underlying asset is gold.	No stable APY	Freely tradable
Alternative Investment Products	$1.74bn	BCAP (size $0.22bn), with underlying assets being LP shares of Blockchain Capital; MI4 (size $0.22bn), with underlying assets being BTC, ETH, SOL, etc.	No stable APY	Trading within a whitelist after KYC / Trading not supported
RWA Asset Category	Overall Size	Mainstream Projects	Avg. APY	Open for Secondary Trading
Stablecoins	$270.14bn	USDT/USDC/USDS/USDe, etc.	0%～10%	Freely tradable
Source: Pharos Research, RWA.xyz, data as of August 28, 2025				

Note: The RWA.xyz platform has inconsistent statistical standards for "Commodities." Another data point shows $1.9bn, but after cross-verification, the figure of $2.36bn was chosen.

Analyzing by asset class: The top three segments of on-chain RWA are Private Credit, US Treasury Debt, and Commodities, with current sizes of $16 billion, $7.5 billion, and $2.4 billion, respectively, accounting for approximately 56%, 27%, and 9% of the market. Among them, Private Credit mainly connects to high-yield assets such as corporate credit, accounts receivable, and structured debt, with representative platforms including Figure Protocols, Centrifuge, Maple, and TrueFi. A typical product in the U.S. Treasury sector is BUIDL ($2.39 billion in size), with its underlying assets covering short-term Treasuries and reverse repos. The commodities segment is primarily contributed by PAXG and XAUT, which together account for 75% of the tokenized gold market.

Note: The above data is sourced from RWA.xyz and compiled by Pharos Research.

Source: Pharos Research, RWA.xyz

2.2.2 Growth Potential

Looking ahead, the market widely believes that the potential for RWA expansion has far from reached its ceiling. According to a joint research report released in July 2022 by Boston Consulting Group (BCG) and digital securities platform ADDX, titled "Relevance of On-Chain Asset Tokenization in 'Crypto Winter'," the total size of global tokenized assets is expected to reach $16 trillion by 2030, representing a growth potential of over 600 times the current level.[1]

An important reference is the development of crypto asset ETFs. As of the market close on August 27, 2025, the total size of Bitcoin ETFs was $144.6 billion, and Ethereum ETFs was $32.6 billion, with their combined size being approximately 6.6 times that of the non-stablecoin RWA market. From a structural perspective, their positioning in the capital market is distinctly different: ETFs act more as a "capital gateway," packaging on-chain crypto assets into traditional financial products to facilitate the entry of traditional funds into the market. In contrast, RWA serves as an "asset gateway," building a new market foundation for the DeFi ecosystem by mapping off-chain real assets on-chain.

Furthermore, the significance of ETFs lies in establishing compliant channels and gaining public market recognition, but their investment targets are still limited to BTC and ETH, primarily meeting speculative and hedging demands. The advantage of RWA, however, lies in the breadth of asset coverage and the support of real-world yields. Bonds, gold, real estate, and corporate credit can all serve as underlying assets for on-chain products, enabling DeFi protocols to carry a richer variety of real-world value. In comparison, ETFs are essentially a repackaging of existing crypto assets, whereas RWA is more likely to achieve deep structural integration with traditional finance. Through smart contracts and on-chain account systems, RWA can be embedded into various DeFi applications such as collateralized lending, yield aggregation, and stablecoin backing, driving the formation of a new financial market landscape.

Therefore, in terms of scale potential, the development of ETFs is geared towards hundreds of billions of dollars in capital inflows, while the ceiling for RWA corresponds to over $100 trillion in global investable financial assets. The former is closer to the derivatives layer of traditional markets, whereas

the latter directly targets the access of underlying assets from primary and secondary markets. The development path for RWA is more complex, but its long-term significance and depth of ecosystem integration are clearly far greater than that of ETFs.

Comparison of ETF vs. RWA Scale Potential

Type	Core Positioning	Target Market	Estimated On-Chain Potential	Level of Real Asset Integration
BTC/ETH ETF	Capital Gateway: Packages on-chain crypto assets into traditional financial products to guide traditional capital inflow.	Crypto assets ($4T), current total ETF net asset ratio for both is ~7%.	Hundreds of billions in capital inflow.	Secondary market derivatives level.
RWA	Asset Gateway: Maps off-chain real assets on-chain to serve as foundational assets for DeFi.	Global investable financial assets (>$100T).	Trillions in on-chain assets.	Primary/secondary asset-level integration.
Source: Pharos Research				

2.3 Industry Driving Factors

The forces supporting the continued rise in RWA penetration are primarily reflected in three main themes: the interest rate cycle, institutional adoption, and regulatory progress.

2.3.1 Rising Interest Rate Cycle: Real Interest Becomes an Anchor for On-Chain Allocation

Since 2022, the world has entered a high-interest-rate environment, with the U.S. Federal Funds Rate remaining above 5% for an extended period, significantly increasing the attractiveness of traditional assets like U.S. Treasuries and money market funds. Simultaneously, as the crypto market undergoes deleveraging and a decline in risk appetite during bull-bear transitions, problems such as falling risk-free rates in traditional DeFi and the intense competition among similar yield strategies have become prominent. This has accelerated investor demand for "stable and predictable" yield-bearing assets. RWA is perfectly positioned to meet this demand by mapping U.S. Treasuries, bonds, and various verifiable income certificates on-chain, providing on-chain capital with an alternative allocation of "low volatility + real interest" and re-establishing the link between on-chain yields and the off-chain interest rate anchor.

2.3.2 Led by Top Institutions: Asset Supply and Credit Endorsement Come On-Chain Simultaneously

Since 2023, major global financial institutions such as BlackRock, Franklin Templeton, WisdomTree, J.P. Morgan, and Citibank have entered the RWA space. Their approaches include issuing on-chain fund shares, creating tokenized U.S. Treasury products, and launching Tokenized Asset funds, attempting to achieve "native on-chain" representation of underlying assets rather than simple bridging. This combines sovereign and institutional credit as the foundation on one end with on-chain settlement and composability as the vehicle on the other, significantly enhancing market acceptance and

sustainability of RWA. Representative practices include: Franklin Templeton issuing U.S. money market fund shares as BENJI Tokens on Polygon and Stellar; BlackRock investing in Securitize and planning to issue a tokenized fund on Ethereum; and Citibank piloting on-chain settlement for some of its custody bonds. These initiatives collectively expand the on-chain supply of compliant assets and strengthen market expectations through the participation of large institutions.

2.3.3 Maturing Regulatory Frameworks: Gradual Opening of Compliant Channels

Unlike the unrestrained expansion during the ICO era, RWAs often correspond to heavily regulated assets such as securities, bonds, and funds, and must operate within existing legal and licensing frameworks. In the past two years, regulators in various regions have gradually clarified the legal basis for asset tokenization, token issuance, and holder rights, providing institutional guarantees for pilot projects and large-scale implementation.

Summary of Regulatory Frameworks in Major Regions

Region	Regulatory Progress	Support for RWA
Switzerland	Passed the "DLT Act"	Clearly recognizes the legality of security tokens.
Hong Kong	Virtual asset platform licensing system & regulatory sandbox	Supports pilot issuance of bonds for RWA projects in Hong Kong.
Singapore	MAS promotes Project Guardian	Testing on-chain government bond trading with banks like DBS.
United States	SEC is reviewing several Tokenized Fund filings	Promoting token compliance through pathways like Reg D and Reg A+.
Source: Pharos Research		

Note: Reg A+ is a "light-touch" public offering mechanism under U.S. securities law, allowing issuers to offer stocks or tokens to general investors outside of IPO conditions, with an annual fundraising cap of $75 million. Exodus Movement, INX, and tZERO have all completed asset offerings under this regulation.

In terms of practical implementation, Sygnum Bank in Switzerland has already issued tokenized bonds, allowing investors to participate in corporate financing on-chain. Hong Kong has also supported China Construction Bank in issuing HK$200 million in tokenized green bonds, considered one of Asia's first government-supported Tokenized Bond projects. These explorations demonstrate that with legal certainty and clear holder rights, the productization and scaling of RWA have a replicable path.

2.4 Key Industry Players

The RWA ecosystem, spanning the entire chain of "asset-issuance-trading-data," can be broadly divided into four types of entities: Asset Issuers, Infrastructure Providers, Application Layer Platforms, and Data Service Providers. These roles collaborate and specialize in areas such as compliance, custody, settlement, and user outreach.

2.4.1 Asset Issuers (Token Issuers)

Asset issuers are responsible for converting real-world assets (such as U.S. Treasuries, gold, real estate, etc.) into tokens that can circulate on-chain. They also undertake core responsibilities including designing compliant structures, distributing returns, and overseeing custody.

Representative Asset Issuer Projects

Representative Project	Asset Types On-Chain	Features
Ondo Finance	U.S. Treasuries (OUSG, USDY)	USDY: Underlying assets are short-term U.S. Treasuries, ERC-20; OUSG: Underlying asset is BlackRock's iShares Short Treasury Bond ETF, primarily used to support Ondo's sub-protocol Flux Finance as collateral to mint stablecoins (fUSDC).
Matrixdock	Short-Term U.S. Treasuries (STBT)	Subsidiary Archblock handles compliant custody, in partnership with Coinbase and BitGo.
RealT	U.S. Real Estate Share NFTs	Fractionalizes underlying real estate into on-chain tradable interests, with weekly dividends.
Backed Finance	Stock & Bond ETFs (e.g., IB01)	Issues multiple security-type asset tokens on Polygon, available for trading by KYC-compliant users.
Source: Pharos Research		

2.4.2 Infrastructure Providers (RWA Infra & Issuance Chains)

Infrastructure providers offer underlying capabilities such as issuance, identity verification, compliance support, and asset custody. They are often found in the form of specialized public chains, permissioned chains, or compliant issuance platforms.

Representative Infrastructure Provider Projects

Polymesh	RWA-specific Public Chain	Focuses on compliance and identity verification (On-Chain ID/KYC) for security tokens, supporting issuance by financial institutions.
Provenance Blockchain	Bank-grade RWA Layer1	Collaborates with Figure to support on-chain lending, debt, and real estate registration scenarios.
Securitize	Issuance & Transfer Agent Platform	Provides SEC-compliant STO services, supporting the tokenized issuance of stocks like EXOD.
tZERO	Compliant Trading Platform (ATS)	Supports secondary trading of security tokens, such as on-chain trading for projects like Exodus Class A shares and Overstock.
Polymesh	RWA-specific Public Chain	Focuses on compliance and identity verification (On-Chain ID/KYC) for security tokens, supporting issuance by financial institutions.
Source: Pharos Research		

2.4.3 Application Layer Platforms (Access Products & User Protocols)

Application layer platforms provide users with an entry point for investment and portfolio management, often coupled with DeFi modules to connect retail investors with on-chain RWA.

Representative Application Layer Platform Projects

Project	Function	Features
Maple Finance / Syrup	On-chain Institutional Credit	Launched by Maple, Syrup provides retail users with an "on-chain stable yield" tool, with APY > 7%.
Goldfinch	Real-world Business Credit Lending	Provides on-chain credit financing for projects in emerging markets, using a mechanism of due diligence + community assessment.
Tangible	Real Estate, Gold NFTs	Supports bringing gold and real estate on-chain via RWA NFTs, which can be redeemed offline, enabling physical settlement.
Centrifuge / Tinlake	Accounts Receivable / Commercial Paper	Connects real-world income assets with the on-chain DAI generation system, previously linked with MakerDAO.
Source: Pharos Research		

2.4.4 Data and Index Service Providers (Oracles & Indices)

Data and index service providers supply on-chain protocols with data such as prices, indices, and reference rates, acting as a bridge between off-chain information and on-chain contracts.

Representative Data and Index Service Provider Projects

Project	Data Type	Features
Chainlink	Price Oracles	Provides price feeds for various RWA assets (gold, carbon credits, U.S. Treasuries, etc.).
Truflation	CPI & Inflation Indices	A decentralized U.S. CPI index publishing platform, supporting RWA pricing and index-based products.
RedStone Oracles	Dynamic Asset Data	Provides DeFi protocols with feeds for off-chain interest rates, notes, REITs, etc.
Tokeny	Compliant Identity + Token Standards	Offers KYC modules and a composable issuance framework, helping wallets/exchanges verify asset legality.
Source: Pharos Research		

2.5 Industry Bottlenecks

In the short term, the scaling of RWA is not hindered by a single technological bottleneck but is constrained by a set of profound structural limitations. These constraints are mainly reflected in the dynamic evolution of business models, inherent limitations in market liquidity, and fundamental challenges in compliance frameworks and asset mapping, which collectively shape the current unique audience structure and market landscape.

2.5.1 Dynamic Evolution of Business Models: High Project Maturity and Information Verification Costs

Currently, most projects in the RWA sector are still in the exploratory and experimental stages of their business models. Their core products and strategic positioning change frequently, leading to significant time lags and discrepancies between publicly available information and actual project operations. A typical phenomenon is that public materials or press releases from several months ago no longer accurately reflect their current business focus; for example, projects like Credix have shifted from an early credit platform narrative to a PayFi product matrix. This high frequency of business iteration undoubtedly creates extremely high information verification costs and evaluation difficulties for external institutions conducting due diligence and continuous tracking.

2.5.2 Structural Bottlenecks in Market Liquidity: Permissioned Trading Remains the Mainstream

From a trading structure perspective, the liquidity of the vast majority of current RWA products is strictly limited. Whether it's LP tokens for Private Credit or mainstream tokenized Treasury products, their trading and transfer are generally restricted to whitelisted addresses. Asset classes that can be freely traded permissionlessly in the secondary market are still a minority, primarily concentrated in two categories: (1) those with highly standardized underlying commodities (like gold); and (2) U.S. Treasury products with broader circulation issued by institutions like Ondo Finance under specific compliance frameworks (such as $USDY). This predominantly permissioned market structure greatly suppresses effective price discovery and the exit efficiency for holders.

2.5.3 Fundamental Challenges of Compliance and Asset Mapping: Cross-Domain Governance Gaps Yet to Be Bridged

The core of RWA lies in establishing a reliable mapping between on-chain digital tokens and off-chain legal rights and physical assets. Current mainstream solutions often adopt a "hybrid architecture," where compliance reviews (KYC/AML) are completed off-chain through an SPV or a regulated custodian, and then standardized tokens (like bTokens) are issued on-chain for circulation. However, against the backdrop of inconsistent regulatory policies across different jurisdictions and the absence of a robust on-chain identity system, the sustainability of this model is questionable. Specifically, there are the following issues:

- **Regulatory Arbitrage and Policy Risks:** A considerable number of projects have not obtained securities issuance licenses in their respective jurisdictions but instead use elaborate structural designs to circumvent the legal definition of a "security." Operating in this regulatory gray area continuously exposes them to the risk of tightening policies. If the regulatory environment changes, they could face a compliance crisis leading to business shutdown.
- **Vulnerability of Asset Verification and Rights Protection:** Whether a precise and reliable correspondence is maintained between on-chain tokens and off-chain real assets is a core concern for investors. Currently, users mostly have to rely on audit reports or asset attestations unilaterally issued by the project or custodian, which lack uniform standards and legal enforceability. More importantly, in extreme situations such as underlying asset defaults, early redemptions, or SPV bankruptcy, the process for on-chain token holders to claim their rights and recover assets is highly opaque. Smart contracts themselves cannot automatically handle complex off-chain legal procedures. The incident where Maple Finance LPs were unable to redeem due to defaults by some borrowers is a prime example, which ultimately required resolution through off-chain legal channels.
- **Legal Dilemmas in DeFi Integration:** Integrating RWA as collateral into DeFi lending or Automated Market Maker (AMM) protocols is an important direction for enhancing its application value, but it also introduces new challenges in legal identity classification. The current legal framework is unclear about the nature of such integrated products, which means both project teams and users could face potential accusations of "illegal securities issuance" or "cross-border transaction violations."

These issues force a fundamental adjustment to the grand narrative of "asset mapping," adding significant uncertainty to compliance and regulation. Market cases reflect this: to ensure compliance, Backed Finance proactively chose to limit trading to a whitelist, sacrificing the potential liquidity of its assets; for RealT's on-chain property tokens, the ultimate realization of their value still heavily relies on the KYC verification mechanism of a U.S. entity.

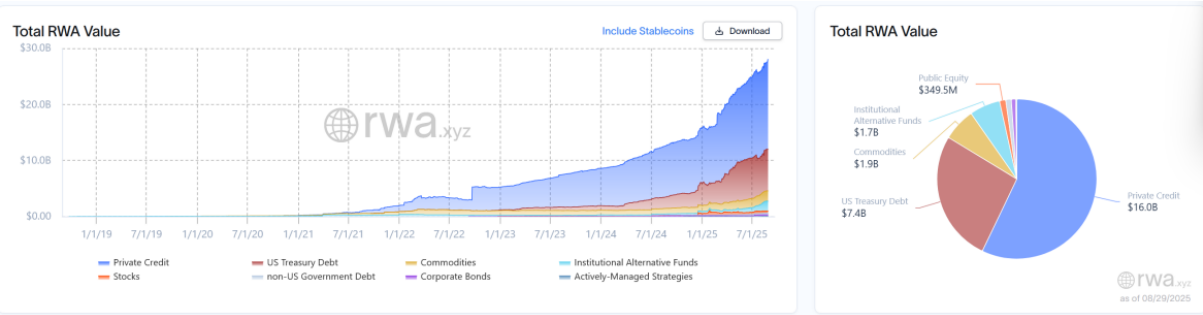
In summary, given these constraints, the current market positioning of RWA exhibits a "mezzanine effect." On one hand, traditional institutions are highly cautious about on-chain operational risks and compliance uncertainties. On the other hand, crypto-native users (Crypto Degens) pursuing high volatility and short-term gains find RWA yields unattractive. Therefore, the core target audience for RWA currently falls to traditional finance retail investors (TradFi Retail) seeking stable asset

allocation and large on-chain capital holders (Whales). Geographically, this demand is particularly prominent in high-inflation countries (such as in Latin America and Southeast Asia).

03 / Core Sector Analysis: Private Credit

3.1 Market Overview

Among the various forms of RWA (excluding stablecoins), Private Credit has consistently been at the forefront in terms of volume and proportion. With $16.0B in Active Outstanding Loans (the balance of loans issued by protocols that have not yet been repaid), it accounts for approximately 56% of this sector.



Source: Pharos Research , RWA.xyz

As a key branch of private finance, the private credit market has evolved into a mature asset class since it was pioneered by giants like Blackstone and KKR in the 1980s and 1990s. Particularly after the 2008 financial crisis, as traditional commercial banks tightened their lending policies, private credit rapidly filled the market gap, becoming an important financing channel for small and medium-sized enterprises (SMEs). By 2023, its global market size exceeded $1.6 trillion. This asset class primarily provides non-publicly traded loans to SMEs that, for various reasons, have difficulty obtaining financing from public markets or banks.

The operational structure of private credit can be clearly divided into off-chain and on-chain layers. Off-chain, the source of the assets remains real and legally effective loan contracts, which are typically held and managed by a special purpose vehicle (SPV). On-chain, the protocol packages the debt held by the SPV into standardized digital tokens using technical standards like ERC-20 or NFTs.

The core characteristics of private credit are as follows: First, the investment threshold is relatively high, with participants typically being qualified investors such as family offices and professional private equity funds, aiming for high fixed income returns. Second, asset liquidity is naturally limited; due to low information transparency, it is often considered a "black box," and with long loan terms, early exit from investments is difficult. Despite this, private credit has a standardized fixed-income structure with clear interest rates, repayment schedules, and maturity dates. It relies on compliant frameworks like SPVs and KYC, and its disclosure and audit standards are increasingly institutionalized. Common underlying assets include SME loans, invoice and accounts receivable financing, trade finance, consumer loans, and real estate mortgages.

3.2 Value and Limitations of the Tokenization Model

The core value of on-chain private credit lies in using blockchain technology to reshape and optimize traditional business processes. It directly connects capital providers with borrowers through a protocol and utilizes smart contracts to transform previously manual tasks—such as asset custody, fund transfers, repayment management, and interest distribution—into automated processes that are visible and traceable on-chain. For investors, this model simplifies their investment activity to subscribing to tokens, which directly represent a clear claim on the principal and interest of the underlying loans. Ultimately, the efficiency and transparency of the entire asset processing are significantly enhanced.

It must be emphasized that tokenization does not change the off-chain nature and dependencies of this asset class. The borrower, pre-loan due diligence, collateral management, repayment, and default resolution all occur in the off-chain world. The on-chain layer primarily serves as a digital certificate and settlement layer. Therefore, if an off-chain default occurs, the on-chain token cannot automatically exercise rights; resolution still relies on traditional legal and compliance frameworks. Thus, the SPV essentially acts as an off-chain compliance intermediary, meaning investors do not directly hold the loan assets but rather hold the debt claims indirectly through the SPV. Its registration, operation, auditing, and default procedures all fall within the off-chain legal system. Borrower onboarding, KYC, credit assessment, and risk control are also managed by centralized entities, making it difficult to achieve the open matchmaking seen in algorithmic models like Aave.

3.3 Key Players

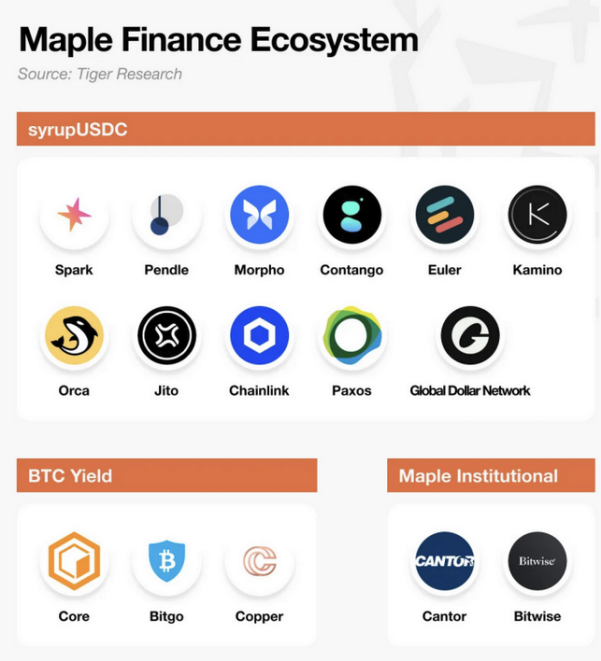
Since its emergence in 2021, the total issuance volume of on-chain private credit (including repaid portions) has exceeded $29 billion, with over 2,500 loan projects issued cumulatively. The current market average annual percentage rate (APR) is 9.75%. [2] The market landscape has gradually become clear, with a group of leading participants distinguishing themselves through stable operations and high total value locked (TVL), including Maple, Goldfinch, Figure, Centrifuge, PACT, and Tradable.

3.3.1 Maple: A Robust Institutional-Grade On-Chain Credit Market

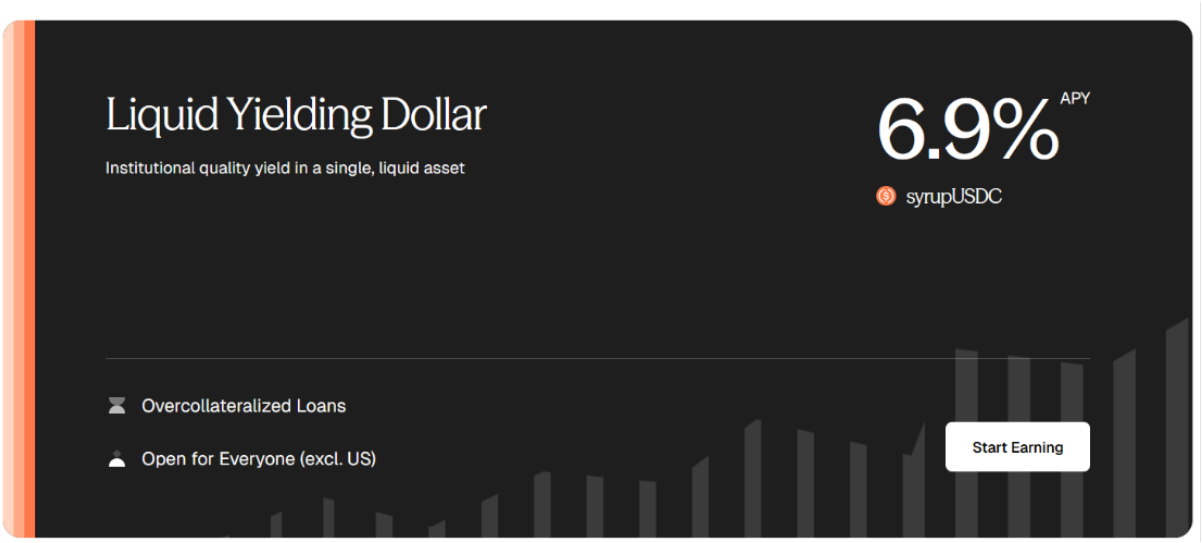
Project Website: https://maple.finance/

Official X Account: https://x.com/maplefinance

Maple Finance is an institutional-grade credit platform, initially focusing on uncollateralized lending. After experiencing the Orthogonal Trading default event, the platform's strategic focus has shifted to the more robust over-collateralized (requiring a 150% collateralization ratio) and Tri-party Agreement models. In this model, an independent third-party institution is responsible for monitoring the value of the collateral, while Maple focuses on executing the smart contracts. If the collateral's value falls below a preset threshold and the borrower fails to post additional collateral within 24 hours of receiving a Margin Call, a third-party liquidation is triggered to protect the interests of the lender. As of the end of August 2025, Maple Finance's assets under management exceeded $3.3 billion, with a cumulative loan total of over $8.9 billion. [3]



Source: Pharos Research, Maple Finance, Tiger Research

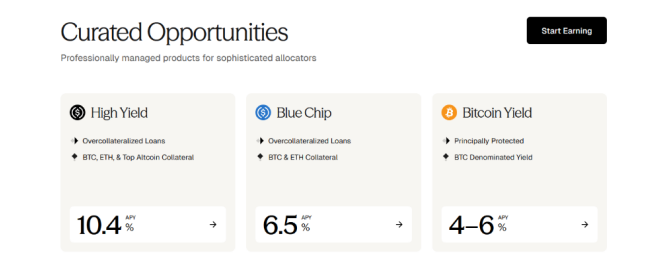


Source: Pharos Research, Maple Finance

The platform's core product lines are divided into "Permissioned Access" and "Open Access" to meet the needs of institutional and retail investors, respectively.

The "Permissioned Access" product series is designed for institutional clients, featuring KYC verification, a minimum investment threshold of $100,000, and a 24/7 "white-glove" service similar to private banking, providing clients with one-on-one support for solution design, fund management, and problem-solving. This series includes three products:

- **Blue Chip Lending Pool:** For conservative, risk-averse investors, this pool only accepts mature crypto assets like Bitcoin and Ethereum as collateral and invests in high-credit-rating loan projects, offering an annualized yield of about 6.5%.
- **High Yield Lending Pool:** Aimed at investors seeking higher returns who can tolerate corresponding risks, its core strategy is to amplify returns through methods like asset staking or re-lending rather than passively holding collateral, with an annualized yield of up to 10.4%.
- **BTC Yield Product:** This product caters to the growing institutional demand for Bitcoin allocation, utilizing a Dual Staking mechanism provided by Core DAO. Institutional clients can custody their Bitcoin with institutional-grade custodians like BitGo or Copper, earning a 4-6% staking return by committing not to sell their assets during a lock-up period.



Source: Pharos Research, Maple Finance

To allow ordinary retail investors to participate, Maple Finance launched the Syrup series of liquidity provider tokens (LP Tokens) in the second half of 2024. As of the end of August 2025, the Total Value Locked (TVL) of SyrupUSDC exceeded $2.2 billion, and SyrupUSDT surpassed $152 million, both offering an annualized yield of approximately 6.9%. [4] The funds raised through Syrup are lent to institutional borrowers from the platform's Blue Chip and High Yield pools, and the interest generated from these loans is directly distributed to Syrup depositors. Although this product shares a similar underlying asset structure with the institutional pools, its risk is independently isolated.

While Syrup's direct yield is slightly lower than institutional products, Maple has introduced a "Drips" reward system to incentivize long-term participation. This system provides additional rewards in the form of points, compounded every four hours. At the end of each quarter, users can redeem these points for the platform's governance token, SYRUP. Staking SYRUP itself yields an annualized return of 2.98%, and additionally, 20% of the platform's lending fee revenue (at a rate between 0.5%-2%) is used to buy back and distribute SYRUP to stakers in the open market.

Furthermore, to enhance the liquidity and composability of its assets, SyrupUSDC has been integrated into several leading DeFi protocols, such as:

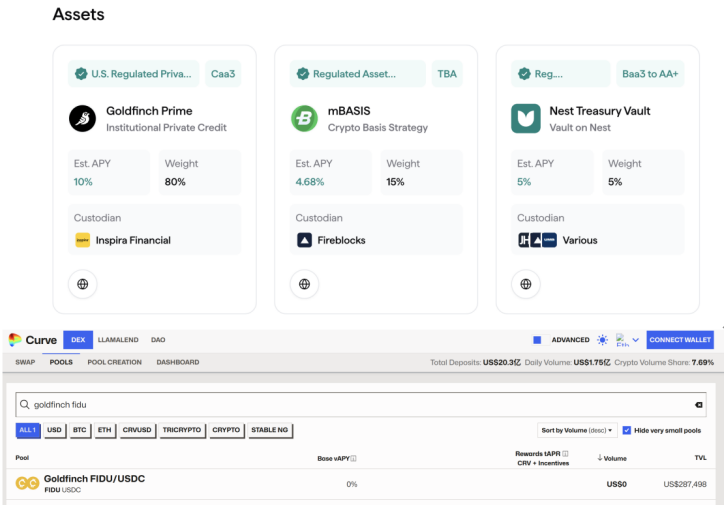
- **Spark:** As a sub-DAO of the Sky ecosystem, Spark has injected 300 million in funds into the SyrupUSDC pool to provide a yield source for its stablecoin.
- **Pendle:** Users can trade the principal and yield components of SyrupUSDC (PT-SyrupUSDC and YT-SyrupUSDC) on the Pendle platform and receive a 3x Drips reward bonus.
- **Morpho / Kamino:** In these lending protocols, SyrupUSDC and its derivatives can be used as eligible collateral to borrow other assets like USDT or USDC.

3.3.2 Goldfinch: An On-Chain Uncollateralized Credit Protocol Focusing on Emerging Markets

Project Website: https://www.goldfinch.finance/

Official X Account: https://x.com/goldfinch_fi

In the on-chain private credit space, Goldfinch is notable for its unique market positioning focusing on "uncollateralized credit." The protocol's core business model is to provide financing to fintech companies and lending institutions in emerging markets, with borrowers widely distributed in Latin America, Southeast Asia, and Africa. The underlying assets for these loans primarily consist of consumer credit, education loans, and SME financing, such as providing capital support to Indian electric vehicle company Greenway and Nigerian consumer lending platform QuickCheck. To date, Goldfinch has facilitated the issuance of over $160 million in loans.[7]

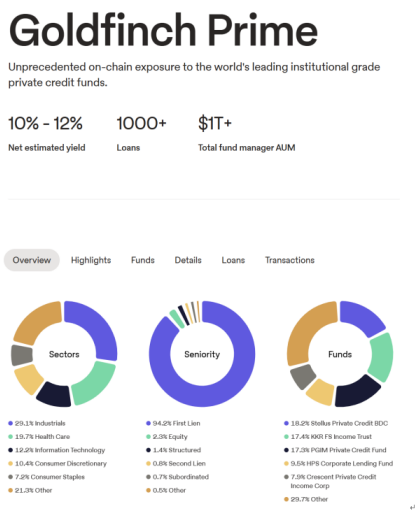


Source: Pharos Research, Goldfinch Finance, Curve

The protocol's structure is designed around a Senior Pool and multiple independent Borrower Pools. In a typical loan transaction, the Senior Pool provides about 90% of the capital, which is allocated automatically by the protocol's smart contract. The remaining portion is provided by "Backers," who act similarly to subordinate investors in traditional finance and whose participation is open only to qualified investors. Ordinary investors, acting as liquidity providers (LPs), can deposit USDC into the Senior Pool to receive FIDU tokens. FIDU not only represents their debt share across all borrower projects but also brings them interest payments on a monthly or quarterly basis. This investment channel is open to non-U.S. retail investors and U.S. qualified investors, with a minimum investment threshold of $100. Although FIDU tokens can theoretically earn additional GFI token incentives in Curve's liquidity pools, their secondary market liquidity is currently extremely limited.

Additionally, to expand its institutional-grade business, Goldfinch launched a private credit asset pool called Goldfinch Prime. This product packages assets from top-tier private equity funds like Apollo, Ares, Golub, and KKR on-chain and, through an integration with the Plume-supported Nest Vault, allows retail users to deposit USDC to earn an annualized yield of about 7%. However, this pool has

a 10-day redemption lock-up period, and its current total value locked (TVL) of $440,000 is relatively small.



Source: Pharos Research, Goldfinch Finance

3.3.3 Figure: An Institutional-Grade Credit Ecosystem Built on a Compliant Permissioned Chain

Project Website: https://www.figure.com/

Official X Account: https://x.com/Figure

As a representative force in the U.S. private credit RWA ecosystem, Figure has become one of the largest entities in terms of on-chain loan issuance volume. Its business scope is extensive, covering various categories such as home equity lines of credit (HELOCs), refinancing loans, and consumer credit, with a cumulative loan issuance volume exceeding $16 billion [5]. Unlike Goldfinch, Figure's underlying assets are predominantly collateralized loans, issued against real-world assets like real estate or qualified credit.

Figure's core operational mechanism relies on its proprietary Provenance Blockchain. The protocol uses special purpose vehicles (SPVs) to hold and manage off-chain loan assets and issues corresponding tokenized securities on the Provenance chain. These tokens are not open to the public but are specifically for subscription by institutional investors such as funds and asset management companies. Asset settlement and profit distribution are executed in strict accordance with off-chain compliance procedures, ensuring the legality of the entire process.

Figure's ecosystem is characterized by its highly closed nature. Provenance is a permissioned blockchain built on the Cosmos SDK, where running validator nodes, deploying smart contracts, and transferring assets all require strict whitelisting and compliance reviews. This feature means that RWA assets within the Figure ecosystem cannot currently be freely composed with the broader DeFi system, nor is there a direct on-chain investment entry point for retail investors. Thanks to its compliance framework, Figure has established deep partnerships with several traditional financial giants, including

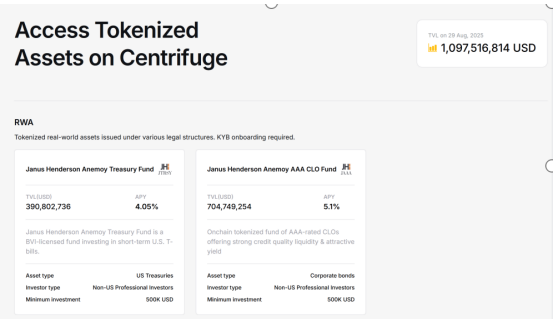
Franklin Templeton, Apollo Global Management, Jefferies, and Hamilton Lane. It is anticipated that these institutions may use the Provenance blockchain to issue their own tokenized private credit products in the future.

3.3.4 Centrifuge: A Strategic Evolution from Market Pioneer to Compliance Infrastructure

Project Website: https://centrifuge.io/

Official X Account: https://x.com/centrifuge

As an early explorer in the on-chain private credit RWA field, Centrifuge successfully issued multiple real-world asset-based pools through its Tinlake framework, covering diverse assets such as real estate mortgages (New Silver), logistics receivables (ConsolFreight), and micro-loans (Branch). These asset pools were isolated through independent SPVs and innovatively used a tiered structure, issuing senior, stable-yield DROP tokens and junior, high-risk/high-reward TIN tokens. This model achieved significant success between 2021 and 2023 and once became a benchmark project in the MakerDAO protocol for minting DAI with real-world collateralized debt. Currently, this architecture has completed its historical mission; the Tinlake frontend has been integrated into the new Centrifuge App, and the related asset pools have entered the repayment and wind-down phase.



Source: Pharos Research, Centrifuge

Currently, the products open to investors on the Centrifuge platform primarily fall into two categories: one is a tokenized U.S. Treasury product issued by the renowned fund company Janus Henderson; the other is structured AAA-rated collateralized loan obligation (CLO) fund shares. A CLO is a financial product that packages multiple floating-rate, lower-credit-rating loans and structures them into tranches through an SPV to meet the needs of investors with different risk appetites. Both investment products are available only to qualified investors and are issued on the Ethereum network.

Furthermore, a series of recent developments clearly indicates that Centrifuge's strategic focus is shifting comprehensively towards compliance scenarios and permissioned blockchains. In May 2025, the project announced it would be one of the first launch partners for Converge, a compliant RWA-specific chain promoted by Securitize and Ethena. In June of the same year, Centrifuge partnered with S&P Dow Jones Indices to jointly explore the development of a "Proof-of-Index" mechanism. This was followed in July by the official launch of Centrifuge V3, which, by integrating the Wormhole cross-chain architecture, established a unified multi-chain RWA infrastructure across six major EVM chains, significantly enhancing its cross-chain liquidity and asset management capabilities.

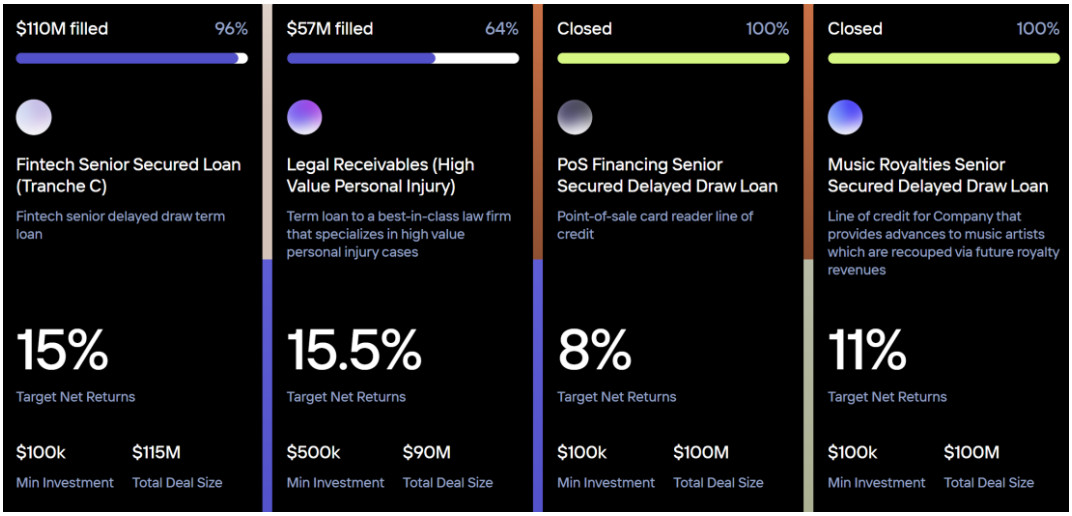
3.3.5 Tradable: A High-Performance Institutional Credit Platform Based on ZK Technology

Project Website: https://www.tradable.xyz/

Official X Account: https://x.com/tradable_xyz

Tradable is currently focused on bringing institutional-grade private credit assets to the blockchain and has achieved significant scale in this area. The platform has processed over $2.1 billion in on-chain private credit assets, completed 37 independent transactions, and provided investors with an average annualized return of over 11%. [6] The core of its business is to offer institutional participants an efficient and compliant channel for tokenized credit investment.

To achieve both high performance and compliance, Tradable has chosen to build on a permissioned blockchain based on ZkSync Era (ZK Stack) technology, while maintaining compatibility with the Ethereum ecosystem. Its underlying smart contract system has built-in strict pre-set compliance mechanisms, including KYC/AML verification, qualified investor certification, and asset transfer restrictions. This architecture dictates that its services are primarily for institutional and qualified investors; ordinary retail investors cannot currently participate directly. All prospective investors must first open an account and pass a comprehensive compliance review process to gain investment eligibility. Additionally, the platform sets a high participation threshold for single transactions, typically requiring a minimum of $100,000.



Source: Pharos Research, Tradable

3.3.6 PACT: A Diversified Credit Solution Incubated by the Aptos Ecosystem

Project Website: https://pactfoundation.com/

Official X Account: https://x.com/pactconsortium

The PACT protocol, incubated and supported by the Aptos Foundation, is dedicated to providing diverse financing solutions for emerging markets and specific regions through tokenized private credit

products. To ensure the legal validity of its on-chain assets, PACT employs an innovative compliance framework: it stores encrypted personally identifiable information (PII) off-chain while verifying it on-chain via hash values, a design that complies with the U.S. Uniform Electronic Transactions Act (UETA). All participants (including borrowers and investors) must pass KYC/AML checks and be authorized before they can engage in on-chain activities such as loan applications, NFT issuance, and lending contract trading.

In the PACT ecosystem, each loan is represented by a dynamically updatable NFT, which not only records the loan terms and repayment status but also carries its transfer rights. Through a partnership with BitGo, these NFTs representing debt claims can be resold and traded on the secondary market. Meanwhile, to address the secure storage of large-scale RWA data, PACT has partnered with the Shelby protocol (jointly launched by Aptos Labs and Jump Crypto) to leverage its high-performance, low-latency decentralized storage capabilities.

To date, the PACT platform has facilitated over $1 billion in loans. Its product portfolio demonstrates a high degree of geographic and risk diversity. A selection of representative products is introduced below:

- **BSFG-EM-1:** As its flagship product, this pool provides short-term micro-loans to individual consumers and micro-entrepreneurs in emerging markets, with a size of over $160 million and a loan interest rate as high as 64.05%.
- **BSFG-EM-NPA-1/2:** These are two special asset pools for non-performing or defaulted loans, with a combined size of $184 million. They are open only to qualified investors, and their specific yields are not publicly disclosed.
- **BSFG-CAD-1:** This pool is collateralized by Canadian residential properties, with a size of $44.51 million, and employs a senior/subordinate tranche structure. Its low interest rate of 0.13% may correspond to the lower-risk senior tranche, but liquidity is limited as the assets are locked.
- **BSFG-AD-1 and BSFG-KES-1:** These two pools serve the SME market in the UAE and the retail credit market in Kenya, respectively, with sizes of $20.05 million and $6.39 million. Their interest rates of 15.48% and 115.45% reflect the high-growth and high-risk characteristics of their respective markets.

Source for the above content: Pharos Research, PACT Foundation

Name	Networks	Ticker	Asset Class	Market Cap
Berkeley Square Emerging Mark...	Aptos	BSFG-EM...	Private Credit	$194,774,896 ▼
Berkeley Square Emerging Mark...	Aptos	BSFG-EM...	Private Credit	$161,536,276 ▼
Berkeley Square Emerging Mark...	Aptos	BSFG-EM...	Private Credit	$107,649,095 ▼
Berkeley Square Emerging Mark...	Aptos	BSFG-EM...	Private Credit	$76,507,608 ▼
Berkeley Square Mortgage Portf...	Aptos	BSFG-CA...	Private Credit	$44,505,940 ▲
Berkeley Square UAE SME Portf...	Aptos	BSFG-AD...	Private Credit	$20,045,914 ▼
Berkeley Square Kenya Retail P...	Aptos	BSFG-KE...	Private Credit	$6,393,009 ▲

Source: Pharos Research, RWA.xyz

Looking ahead, PACT plans to integrate with mainstream DeFi protocols, aiming to introduce its credit tokens into broader decentralized finance scenarios such as revolving loans, leveraged strategies, and liquidity mining, which are expected to offer investors annualized returns of 6% to 15%.

3.4 Trends and Future Outlook

The on-chain private credit sector is transitioning from an early exploratory stage to a period of scaled expansion based on compliance and led by institutions. Although top-tier asset management institutions have already made their move, the next phase of exponential growth will depend on the breadth and depth of participation from a wider range of institutions—expanding from a few pioneers to a full-scale entry of numerous small and medium-sized financial institutions. The true inflection point for future market growth will be a wave of complete "institutionalization" on both the asset and capital sides. This profound structural shift is expected to reshape the sector's landscape from the following three perspectives:

First, the institutionalization of capital will inevitably require a mature regulatory framework. A "compliance-first" and "permissioned" environment will become the industry standard, replacing the previous "wild growth" model. Second, on this compliant foundation, the ultimate value of the sector will be unleashed through deep integration with the DeFi ecosystem, transforming from "asset islands" that simply provide yield into efficient, composable assets that can be used as collateral in mainstream lending protocols. Third, to meet the increasingly complex needs of institutions, underlying assets will continue to innovate beyond standardized loans, extending to more diverse products like Real Estate Investment Trusts (REITs) and structured credit (CLOs), collectively shaping a more mature, integrated, and expansive new landscape for on-chain credit.

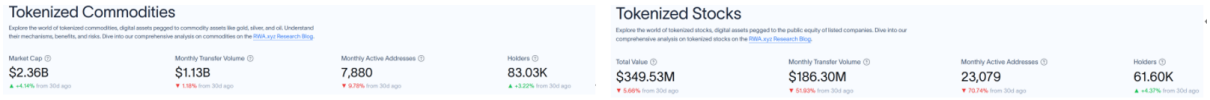
These three trends are interconnected and together outline a clear path for the on-chain private credit sector to mature. The future market will no longer be a simple on-chain mapping but a deep integration of the asset depth and compliance rigor of traditional finance with the efficient settlement and composability of decentralized finance. At that point, on-chain private credit is expected to shed its early high-risk, high-volatility label and truly transform into the "stable yield cornerstone" of the entire on-chain economy, providing the digital asset world with sustainable, low-correlation cash flows derived from the real economy.

04 / Core Sector Analysis: Commodities

4.1 Market Overview and Operating Mechanism

In the sub-sectors of RWA (excluding stablecoins), tokenized commodities are an important component that cannot be overlooked. This category currently ranks third with an asset size of $2.4 billion, accounting for 8.6% of the total market. Particularly noteworthy is its strong growth momentum, with its asset size having recorded an increase of about 136% year-to-date.

The issuance mechanism for this type of RWA generally follows a standardized process, comprising three core elements: physical custody, on-chain mapping, and a redeemable design, thus forming a complete closed loop. First, the issuer deposits physical assets, such as gold, into a regulated professional custodian, ensuring that each unit of the on-chain token is backed by a real physical asset. Then, through smart contracts on the blockchain (primarily Ethereum), tokens are issued at a 1:1 ratio, pegged to the physical assets. Finally, users who meet compliance requirements can redeem their tokens for the corresponding physical assets. Although the minting and burning of these tokens in the primary market generally require users to complete KYC verification, as standard ERC-20 tokens, they can be freely traded in the secondary market. Their on-chain holder count (approx. 83,000) and monthly trading volume (approx. $1.13 billion) are significantly higher than other RWA categories like tokenized stocks, though their trading activity is still predominantly concentrated on centralized exchanges.



Source: Pharos Research, RWA.xyz

PAX Gold Markets

Affiliate disclosures

All | CEX | DEX | Spot | Perpetuals | Futures

#	Exchange		Pair	Price	Spread	+2% Depth	-2% Depth	24h Volume	Volume %	Last Updated	Trust Score
1	Binance	CEX	PAXG/USDT	$3,408.96	0.01%	$1,465,763	$1,445,302	$11,705,885	15.16%	Recently	
2	MEXC	CEX	PAXG/USDT	$3,408.82	0.01%	$142,242	$68,121	$7,862,550	10.18%	Recently	
3	Toobit	CEX	PAXG/USDT	$3,408.27	0.01%	$1,487,476	$2,065,397	$5,856,163	7.58%	Recently	
4	Ourbit	CEX	PAXG/USDT	$3,408.46	0.01%	$50,199	$35,347	$3,478,283	4.5%	Recently	
5	LBank	CEX	PAXG/USDT	$3,410.74	0.01%	$137,557	$59,001	$3,280,074	4.25%	Recently	
6	Binance	CEX	PAXG/TRY	$3,405.50	0.01%	$215,685	$152,072	$886,001	1.15%	Recently	
7	KuCoin	CEX	PAXG/USDT	$3,408.55	0.01%	$87,409	$201,801	$733,460	0.95%	Recently	
8	Kraken	CEX	PAXG/USD	$3,411.15	0.02%	$326,685	$418,914	$1,156,109	1.5%	Recently	
9	BVOX	CEX	PAXG/USDT	$3,408.46	0.01%	$50,824	$55,980	$500,377	0.65%	Recently	
10	Phemex	CEX	PAXG/USDT	$3,407.29	0.03%	$15,482	$18,805	$1,166,190	1.51%	Recently	

Tether Gold Markets

Affiliate disclosures

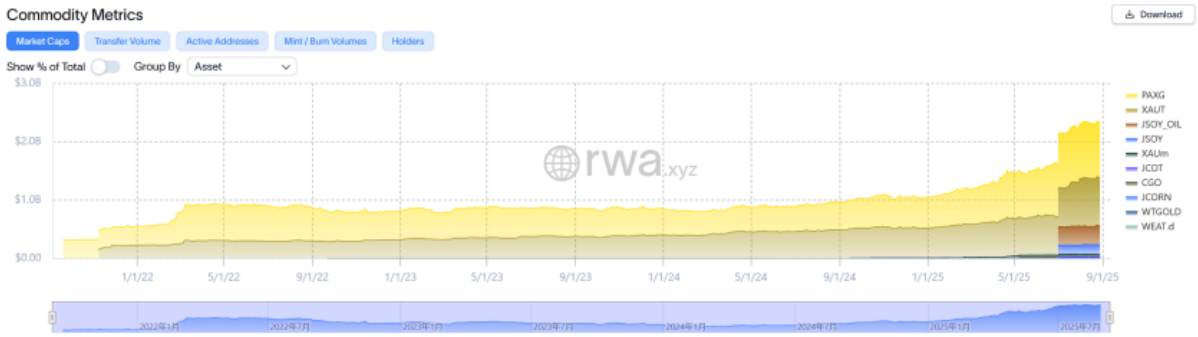
All | CEX | DEX | Spot | Perpetuals | Futures

#	Exchange		Pair	Price	Spread	+2% Depth	-2% Depth	24h Volume	Volume %	Last Updated	Trust Score
1	HTX	CEX	XAUT/USDT	$3,416.64	0.02%	$20,993	$17,108	$10,873,984	43.41%	Recently	
2	Bybit	CEX	XAUT/USDT	$3,404.34	0.01%	$378,744	$250,450	$1,565,212	6.25%	Recently	
3	Gate	CEX	XAUT/USDT	$3,407.81	0.01%	$325,390	$319,197	$1,387,816	5.54%	Recently	
4	Ourbit	CEX	XAUT/USDT	$3,403.74	0.01%	$102,312	$72,981	$1,491,989	5.96%	Recently	
5	Zoomex	CEX	XAUT/USDT	$3,404.12	0.01%	$89,519	$80,130	$626,007	2.5%	Recently	
6	XBO.com	CEX	XAUT/USDT	$3,403.94	0.03%	$123,398	$16,306	$639,985	2.55%	Recently	
7	WEEX	CEX	XAUT/USDT	$3,404.91	0.01%	$3,454	$4,123	$78,488.76	0.31%	Recently	
8	KCEX	CEX	XAUT/USDT	$3,404.74	0.02%	$6,950	$4,914	$137,377	-	Recently	
9	BloFin	CEX	XAUT/USDT	$3,404.81	0.23%	$112,507	$79,001	$1,147,338	4.58%	Recently	
10	Bitrue	CEX	XAUT/USDT	$3,404.56	0.4%	$2,946	$2,073	$2,203,706	8.8%	Recently	

Source: Pharos Research, CoinGecko

4.2 Market Landscape

Currently, the tokenized commodities market exhibits a highly concentrated duopoly structure. The vast majority of products are backed by gold, with PAXG issued by Paxos (market cap $960 million) and XAUT issued by Tether (market cap $840 million) accounting for 40.7% and 35.6% of the market share, respectively, together controlling over 75% of the market.



Source: Pharos Research, RWA.xyz

However, despite their large market capitalization and trading volume, the integration of PAXG and XAUT into Decentralized Finance (DeFi) protocols is extremely limited. Currently, no major lending protocol supports these two assets as collateral. Although the Aave protocol briefly listed PAXG for collateral, it was eventually removed due to low liquidity. While there are related liquidity pools on decentralized exchanges like Uniswap and Curve, the total value locked (TVL) in these pools is generally small, and trading depth is severely insufficient. This means that apart from providing liquidity to earn trading fees, users have almost no way to use these assets in more core DeFi modules such

as lending, yield aggregation, or structured derivatives. Their composability advantage as RWA assets remains largely untapped.

#	Pool	Protocol	Fee tier	↓ TVL	Pool APR	1D vol	30D vol
1	PAXG/ETH	v2	0.3%	$18.1M	4.3%	$710.6K	$24.2M
2	PAXG/USDC	v3	0.05%	$4.6M	10.88%	$2.7M	$70.1M
3	PAXG/USDC	v3	0.3%	$1.6M	8.3%	$118.8K	$3.7M
4	PAXG/USDC	v4	0.3%	$1.0M	8.81%	$84.5K	$1.6M
5	PAXG/DAI	v4	0.05%	$524.4K	6.01%	$172.6K	$2.2M
6	WBTC/PAXG	v4	0.3%	$68.7K	5.18%	$3.2K	$64.5K
7	ETH/PAXG	v4	0.3%	$49.1K	9.71%	$4.4K	$215.7K
8	PAXG/ETH	v3	1%	$20.8K	23.17%	$1.3K	$30.9K
9	WBTC/PAXG	v4	0.3%	$20.4K	2.55%	$474.99	$7.3K
10	PAXG/USDT	v3	0.3%	$17.2K	0.16%	$25.43	$11.7K
11	PAXG/USDT	v4	0.3%	$11.6K	0.00%	-	$291.76

Matrixdock Gold Markets

Affiliate disclosures

All | CEX | DEX | Spot | Perpetuals | Futures

#	Exchange		Pair	Price	Spread	+2% Depth	-2% Depth	24h Volume	Volume %	Last Updated	Trust Score
1	Momentum	DEX	XAUM/USDC	$3,413.38	0.6%	$20,504	$20,443	$114,673	50.26%	Recently	
2	Rooster Protocol	DEX	XAUM/USDC.E	$3,407.11	0.63%	$574	$572	$2,699.51	1.18%	Recently	
3	BitKan	CEX	XAUM/USDT	$3,423.78	0.08%	$148,629	$9,574	$88,431.54	38.76%	Recently	
4	PancakeSwap V3 (BSC)	DEX	XAUM/BSC-USD	$3,395.80	0.6%	$6,873	$6,852	$13,222.14	5.8%	Recently	
5	Uniswap V3 (Ethereum)	DEX	XAUM/USDT	$3,405.76	0.61%	$2,157	$2,150	$4,550.04	1.99%	Recently	
6	PancakeSwap V3 (BSC)	DEX	XAUM/WBNB	$3,395.52	0.61%	$776	$773	$2,572.60	1.13%	Recently	
7	PancakeSwap V3 (BSC)	DEX	XAUM/BTCB	$3,410.46	0.62%	$665	$663	$1,856.75	0.81%	Recently	
8	PancakeSwap (v2)	DEX	XAUM/WEB4	$3,391.70	0.73%	$63	$63	$35.19	0.02%	Recently	

Source: Pharos Research, CoinGecko

4.3 Trends and Future Outlook

Although the current market is dominated by a few leading projects, a clear trend is the increasing diversification of issuers, expanding from crypto-native institutions to a broader range of traditional public companies and financial entities. Matrixdock, a subsidiary of Matrixport, has already launched its tokenized gold product. More significantly, NASDAQ-listed company Blue Gold Limited (NASDAQ: BGL) has announced plans to issue the BGC token. Its underlying asset is not traditional physical gold but gold forward contracts for future delivery, marking an important step in the complexity and innovation of tokenized commodity financial products.

Looking ahead, the boundaries of tokenized commodities will extend from precious metals to broader fields, while the choice of technology will also see a multi-chain coexistence. For example, Singaporean agricultural trading company Davis Commodities Ltd. plans to build an on-chain trading platform to introduce bulk agricultural products like white sugar and rice into the tokenized world for the first time. Additionally, the cross-industry collaboration between U.S. medical device company BioSig and Streamex, planning to issue a gold token on the Solana blockchain, indicates that future asset issuance will no longer be limited to Ethereum. The entry of these newcomers is not only expected to inject new vitality into the market but could also fundamentally break the existing duopoly, ushering in a new era of development with more diverse asset types and a wider range of participants.

05 / Core Sector Analysis: Stocks

5.1 Market Overview

Tokenized stocks, serving as a bridge connecting the traditional financial world with the digital asset world, hold immense potential within the future RWA industry. Market participants can be mainly categorized into three groups: retail investors in emerging markets seeking access to U.S. stocks, traditional finance professionals (or high-net-worth individuals) looking to manage their positions, and quantitative trading firms aiming to discover arbitrage opportunities.

Compared to the $4.4 trillion market capitalization of a single stock like NVIDIA (NASDAQ: NVDA), the current total market cap of all tokenized stocks is only $359 million. This highlights that the sector is still in its very early stages, with tremendous room for imagination and huge potential. On the other hand, it also reveals the challenges the industry faces: limited participants and severe liquidity shortages.

Name	Ticker	Protocol	Networks	Underlying Stock	Total Value	NAV	Issuer Legal Name / Legal Identifier	Domicile
Exodus Movement Inc. ...	EXOD	Securitize	Algorand	Exodus Movement Inc. ...	$235,047,600 ▼	$26.16 ▼	Exodus Movement, Inc.	United States of America
Montis Group Limited	MGL	Archax	XRP Ledg...	—	$55,350,514	$1.39	Montis Group Limited	United Kingdom
Tesla xStock	TSLAx	Backed Finance...	Solana	Tesla	$10,616,187 ▲	$346 ▲	Backed Assets GmbH	Switzerland
SP500 xStock	SPYx	Backed Finance...	Solana	SPDR S&P 500 ETF	$5,363,855 ▲	$649 ▲	Backed Assets GmbH	Switzerland
NVIDIA xStock	NVDAx	Backed Finance...	Solana	NVIDIA	$4,984,527 ▲	$180 ▲	Backed Assets GmbH	Switzerland
MicroStrategy xStock	MSTRx	Backed Finance...	Solana	MicroStrategy	$4,232,256 ▼	$339 ▼	Backed Assets GmbH	Switzerland
Backed CSPX Core S&P...	bCSPX	Backed Finance...		iShares Core S&P 500 U...	$3,625,998 ▲	$693 ▲	Backed Assets GmbH	Switzerland
CRCLx xStock	CRCLx	Backed Finance...	Solana	Circle Internet Group	$3,601,975 ▼	$131 ▼	Backed Assets GmbH	Switzerland
Backed Coinbase	bCOIN	Backed Finance...		Coinbase	$3,109,455 ▼	$308 ▼	Backed Assets GmbH	Switzerland
Alphabet xStock	GOOGLx	Backed Finance...	Solana	Alphabet Class A	$2,423,190 ▲	$212 ▲	Backed Assets GmbH	Switzerland
Apple xStock	AAPLx	Backed Finance...	Solana	Apple	$2,038,545 ▲	$233 ▲	Backed Assets GmbH	Switzerland
Coinbase xStock	COINx	Backed Finance...	Solana	Coinbase	$1,702,250 ▼	$308 ▼	Backed Assets GmbH	Switzerland
Strategy Inc Common S...	MSTR.d	Dinari		MicroStrategy	$1,534,217 ▼	$339 ▼	Dinari, Inc.	United States of America

Source: Pharos Research, RWA.xyz

Deconstructing the existing market size reveals a peculiar composition. The top-ranked asset by market cap, EXOD (over $235 million), represents a native on-chain equity from a 2021 compliance framework, which differs from the mainstream stock mapping model. The second-ranked, MGL, is an experimental product within the UK's regulatory sandbox and cannot be freely traded. After excluding

these special cases, the active tokenized U.S. stock market shows a highly concentrated landscape, with the xStocks series issued by Backed Finance holding an absolute dominant position. Additionally, tokenized products from Dinari and Swarm have also gained some market attention.

Top Entities

Underlying Stock | Networks | Issuers

#	Stock	RWA Count	Market Cap	30D%	Market Share
1	EXOD	1	$235.0M	▼ 10.04%	80.10 % ▼
2	TSLA	4	$11.2M	▲ 20.26%	3.81 % ▲
3	MSTR	4	$6.2M	▲ 6.16%	2.13 % ▲
4	SPY	3	$5.5M	▲ 12.99%	1.88 % ▲
5	NVDA	5	$5.2M	▼ 16.49%	1.76 % ▼
6	COIN	5	$5.1M	▼ 27.04%	1.73 % ▼
7	CSPX	1	$3.6M	▼ 5.21%	1.24 % ▲
8	CRCL	2	$3.6M	▼ 3.04%	1.23 % ▲
9	GOOGL	3	$2.5M	▲ 30.52%	0.84 % ▲
10	AAPL	4	$2.2M	▲ 13.89%	0.73 % ▲

Source: Pharos Research, RWA.xyz

From the perspective of underlying asset types, the currently tokenized stocks in the market show a clear strategic preference, mainly concentrating on two categories: one is stocks of globally renowned high-tech companies like the "Magnificent Seven," and the other is stocks of companies highly correlated with the crypto market, such as Coinbase (NASDAQ: COIN) and MicroStrategy (NASDAQ: MSTR). Among them, the tokenized product for Tesla (NASDAQ: TSLA) is the only one with a market cap exceeding the ten-million-dollar level; the market size of other products is mostly in the millions, indicating that the overall market depth is still quite shallow.

5.2 Analysis of Market Operating Models

In terms of implementation, the mainstream issuance models for tokenized stocks in the current market can be broadly categorized into three types, with significant differences in supported assets and investor rights.

Comparison of Three Stock Tokenization Models

Model	Representative Projects	Asset Backing	Investor Rights	Key Risks	Risk Level
Third-Party Custody + Exchange Access	XStocks (Backed Finance)	Clearly 1:1 backed by the underlying stock.	Off-chain custody with 1:1 backing; no shareholder rights; dividends reinvested according to rules.	Transparency depends on the custodian; risk of liquidity and price deviation; significant geographic restrictions.	Medium
Licensed Broker-Dealer Self-Operated	Robinhood; Dinari; Ondo	Clearly 1:1 backed by the underlying stock (Ondo's model not yet specified).	Highest level of compliance; often supports dividends; other shareholder rights pending implementation.	High technical and legal complexity; regional and eligibility restrictions; M&A outcomes depend on regulatory approval.	Low
Synthetic Assets (CFD)	Mirror Protocol (long inactive)	No physical asset backing, only tracks the price.	Not 1:1 physical backing, only price exposure; no shareholder rights.	High risk of de-pegging and regulatory uncertainty.	Highest
Source: Pharos Research					

- **Third-Party Custody and Exchange Access Model:** Represented by xStocks, the issuer, Backed Finance, holds real stocks through a special purpose vehicle (SPV) and uses an independent off-chain custodian for asset security. The product is ultimately offered for trading on centralized exchanges like Kraken and Bybit. According to the platform, xStocks aim to reflect the price and behavior of the underlying stock, do not grant shareholder rights (voting, residual claims, etc.), and dividends are automatically reinvested into the same token balance according to rules. This model uses oracles for price pegging, but its transparency and the authenticity of the assets heavily rely on the custodian's reputation.
- **Licensed Broker-Dealer Self-Operated Model:** This path is operated by entities with securities business qualifications, creating a closed loop for issuance and settlement. For example, Robinhood uses its broker-dealer license to provide a complete end-to-end service from issuance and trading to settlement directly on the blockchain (currently on Arbitrum, with plans for its own L2). Similarly, projects like Ondo Finance and Dinari have obtained U.S. SEC-recognized broker-dealer licenses through acquisition or registration, giving them the qualification to compliantly issue and settle tokenized securities. This path has the highest level of compliance but also comes with significant technical and legal complexity.
- **Synthetic Assets Model:** The typical representative of this model is the now-defunct Mirror Protocol. Users receive synthetic derivatives pegged to the stock price, not an on-chain mapping of 1:1 physical shares, and thus do not have shareholder rights. This path relies on price feeds and market making, making it susceptible to pricing deviations and regulatory uncertainty, which exposes the platform to immense regulatory pressure and asset de-pegging risks.

It is worth noting that in practice, these issuance models (especially the first two) are not distinctly separate but show significant overlap and dynamic evolution. On one hand, licensed issuers often

combine third-party custody and external exchange access strategies to enhance asset transparency and market liquidity. On the other hand, non-licensed projects are actively seeking broker-dealer qualifications through applications or acquisitions to move towards a self-operated model. Strictly speaking, the only issuer in the market that has truly achieved end-to-end vertical integration is Robinhood. Even Dinari, which has obtained a key broker-dealer license, is still in the early stages of building its independent self-operated system and currently relies on third-party custody to support its core business.

5.3 Analysis of Key Compliance Licenses

In the United States, tokenizing securities like stocks and offering trading services is a highly regulated financial activity that must be conducted under the framework of the U.S. Securities and Exchange Commission (SEC) and the Financial Industry Regulatory Authority (FINRA). Any project aiming to build an end-to-end, fully compliant tokenized stock ecosystem typically needs to obtain the following three key types of licenses.

Comparison of Three Key U.S. Compliance Licenses

License	Difficulty	Primary Use	Role in the Tokenization Ecosystem	Players with the License
Transfer Agent (TA)	Low	Maintains the official shareholder register, records ownership, handles dividends, etc.	Compliance Cornerstone: Ensures alignment between on-chain and off-chain rights.	Dinari, Ondo, Securitize
Broker-Dealer (BD)	Medium	Executes securities transactions, processes client orders.	Primary Market Core: Handles the compliant minting and redemption of tokens.	Dinari, Ondo, Securitize, Robinhood
Alternative Trading System (ATS)	High	Operates a compliant secondary market trading platform.	Secondary Market Core: Provides legal peer-to-peer trading of tokens.	Ondo, Securitize
Source: Pharos Research				

These three licenses together form a complete business loop, and their difficulty of acquisition can be roughly ranked as: Transfer Agent (TA) < Broker-Dealer (BD) < Alternative Trading System (ATS).

- **Transfer Agent (TA)** is to act as the official "shareholder registrar" for a securities issuer, responsible for accurately tracking and recording the ownership of securities. In the tokenization business, the TA's role becomes particularly crucial as it is the cornerstone for ensuring the precise mapping between on-chain digital tokens and off-chain legal rights. The TA maintains the authoritative legal register of token holders, meaning that regardless of how on-chain wallet addresses change, the ultimate legal beneficiary of the asset can be confirmed. This function is vital for resolving ownership disputes and ensuring the accurate distribution of

dividends and other rights, forming the foundation of trust for the entire asset tokenization compliance system.

- **Broker-Dealer (BD)** license is the passport to engage in any securities business, authorizing an entity to execute securities transactions for others or for its own account. In the context of tokenized stocks, this license is the legal prerequisite for a platform to compliantly handle users' primary market operations. Specifically, whether a user is buying tokens with fiat or stablecoins ("minting") or selling tokens for funds ("redeeming"), the underlying stock transactions and settlements must be executed by an entity holding a BD license. Therefore, the BD license is the core compliance hub connecting investors to the primary issuance of tokenized assets.
- **Alternative Trading System (ATS)** license authorizes an entity to operate a regulated secondary market trading platform, providing legal matching services for securities not listed on national exchanges. For tokenized stocks, the ATS license is the key to unlocking their true liquidity. If a platform only holds the first two types of licenses, it can only handle the issuance and redemption of assets but cannot facilitate legal peer-to-peer trading among users. Only with an ATS license can a platform build a compliant secondary market, thereby enabling effective price discovery, enhancing asset turnover efficiency, and ultimately solving the long-standing liquidity problem of tokenized assets.

Based on the above core licensing framework, two noteworthy points have emerged regarding compliance pathway choices in the current market:

First, it is necessary to clearly distinguish between the licensing boundaries of securities business and money services. The aforementioned TA/BD/ATS licenses constitute the indispensable "orthodox" compliance path for conducting tokenized stock business in the United States. The MSB (Money Services Business) license mentioned by some projects in their marketing materials pertains to activities like fund transfers and is not a securities license; it cannot substitute for the legal functions of securities licenses in any way.

Second, precisely because of the extremely high compliance barriers in the U.S. market, industry pioneers have shown a clear convergent strategy: bypass the U.S. and establish operational bases in European jurisdictions with clearer regulations. For example, Robinhood relies on a Lithuanian license to issue derivatives under the EU's MiFID II framework, while Backed Finance (xStocks) is based in Switzerland and operates under its DLT Act. Although their legal paths differ, their strategic goal is the same—to target the vast non-U.S. market as their core business, while operating under a compliant framework.

5.4 Key Players

5.4.1 xStocks (Backed Finance): Compliant On-Chain Price-Tracking Certificates

Project Website: https://xstocks.com/

Official Twitter Account: https://x.com/xstocksfi

Issued by the Swiss-compliant asset tokenization platform Backed Finance, xStocks are a representative product of the open model in the tokenized stock sector. (Backed Finance also issues btokens, which track the price of a publicly traded security such as an ETF, stock, or treasury bond).

Since June 30th of this year, the xStocks series has been progressively listed on major exchanges like Bybit, Kraken, and Gate.io (some supporting leverage and shorting mechanisms). Its core operational model involves placing 1:1 corresponding real stocks under the custody of regulated third-party institutions like InCore Bank. After initially launching on the Solana public chain, it has further expanded its issuance network to BNB Chain and TRON, demonstrating a clear multi-chain development strategy. Currently, the Backed Finance platform offers over 60 U.S. stock tokens, with its popular products holding a dominant position in the active tokenized U.S. stock market.

Tesla xStock Backed Assets	TSLAx	Backed Finance...	Solana	Tesla	$10,616,187 ▲	$346 ▲	Backed Assets GmbH 506700W43BCJQW7FA481	Switzerland
SP500 xStock Backed Assets	SPYx	Backed Finance...	Solana	SPDR S&P 500 ETF	$5,363,855 ▲	$649 ▲	Backed Assets GmbH 506700W43BCJQW7FA481	Switzerland
NVIDIA xStock Backed Assets	NVDAx	Backed Finance...	Solana	NVIDIA	$4,984,527 ▲	$180 ▲	Backed Assets GmbH 506700W43BCJQW7FA481	Switzerland
MicroStrategy xStock Backed Assets	MSTRx	Backed Finance...	Solana	MicroStrategy	$4,232,256 ▼	$339 ▼	Backed Assets GmbH 506700W43BCJQW7FA481	Switzerland
Backed CSPX Core S&P... Backed Assets	bCSPX	Backed Finance...		iShares Core S&P 500 U...	$3,625,998 ▲	$693 ▲	Backed Assets GmbH 506700W43BCJQW7FA481	Switzerland
CRCLx xStock Backed Assets	CRCLx	Backed Finance...	Solana	Circle Internet Group	$3,601,975 ▼	$131 ▼	Backed Assets GmbH 506700W43BCJQW7FA481	Switzerland
Backed Coinbase Backed Assets	bCOIN	Backed Finance...		Coinbase	$3,109,455 ▼	$308 ▼	Backed Assets GmbH 506700W43BCJQW7FA481	Switzerland
Alphabet xStock Backed Assets	GOOGLx	Backed Finance...	Solana	Alphabet Class A	$2,423,190 ▲	$212 ▲	Backed Assets GmbH 506700W43BCJQW7FA481	Switzerland
Apple xStock Backed Assets	AAPLx	Backed Finance...	Solana	Apple	$2,038,545 ▲	$233 ▲	Backed Assets GmbH 506700W43BCJQW7FA481	Switzerland

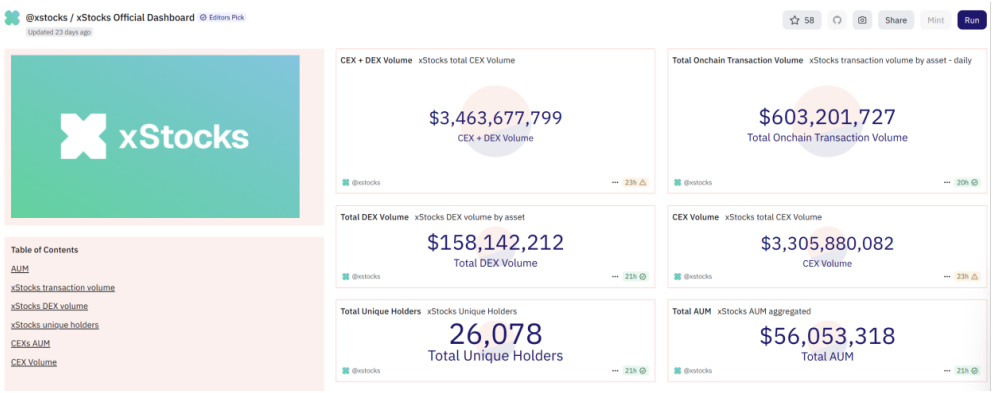
Source: Pharos Research, RWA.xyz

The ecosystem construction of xStocks shows a clear strategic hierarchy. Market access is initially driven by the core issuer, Backed Finance, in collaboration with top distribution channels like Bybit and Kraken, which provide the project with crucial initial liquidity and user reach. Building on this foundation, xStocks actively integrates into its native Solana DeFi ecosystem. By integrating with leading DEX aggregators like Jupiter, automated market makers like Raydium, and lending protocols like Kamino Finance, it aims to enable core on-chain scenarios such as trading and collateralized lending. Finally, the project expands user access through a partnership with payment gateway Alchemy Pay and lists its products on exchanges like the African cryptocurrency exchange VALR, demonstrating its global vision for expansion into emerging markets.

Source: Pharos Research, Backed Finance

(1) Market Liquidity Performance

In terms of market liquidity data, the performance of xStocks is mixed. According to Dune data, the current total on-chain transaction volume for xStocks is $600 million, while the exchange trading volume is $3.46 billion (with CEXs accounting for over 95%). Its on-chain trading is primarily concentrated on Raydium, but the depth and volume of its core trading pairs are severely lacking compared to mainstream pairs like SOL/USDC, indicating low capital efficiency for on-chain market making. However, its spot trading volume on centralized exchanges far exceeds that on-chain, and it is estimated that its overall spot volume could be comparable to some mid-cap altcoins. Nevertheless, whether on-chain or off-chain, insufficient liquidity depth remains its core challenge, leading to low transaction efficiency for users and a trading experience that still lags significantly behind traditional financial platforms.



Source: Pharos Research, Dune

(2) Issuance and Custody Mechanism

The issuance process of xStocks creates a complete closed loop connecting traditional financial markets with the blockchain. Based on public information, the operational flow is as follows: First, the Swiss-registered parent company instructs its Jersey-based entity (Backed Assets) to purchase the corresponding stocks on the U.S. secondary market through prime brokerage services of major brokers like Interactive Brokers. These stocks are then transferred to and held in a segregated account at Clearstream, a depository under Deutsche Börse. Once the stocks are securely deposited, this action triggers a smart contract deployed on the Solana chain to mint the corresponding xStocks tokens (e.g., TSLAx) at a 1:1 ratio. Finally, these tokens can be directly listed for trading on exchanges

like Kraken and Bybit. Conversely, investors holding a sufficient amount of tokens can also apply to Backed Finance to redeem the tokens for the real stocks.

(3) Nature of the Token: A Corporate Bond Tracking Stock Price

According to the prevailing view within the industry, xStocks are not legally structured as equity tokens but are essentially a form of corporate debt that tracks the price of the underlying asset. This clever design has several key features: First, the issuing entity (usually an SPV) does not require a custody license, while distribution is handled by entities with the appropriate licenses (such as Kraken's Bermuda subsidiary). Second, due to their bond nature, dividend payments can be simplified to airdropping more tokens to holders, and it does not involve complex corporate actions like voting rights. Most importantly, as bearer bonds, their ownership transfer on-chain does not require registration, thus avoiding the stamp duty associated with traditional equity trades and enabling frictionless on-chain circulation. However, this model also has its limitations. Its high trading spreads and fees mean that its current core value is still limited to providing users with price exposure to U.S. stocks, and it is still a long way from true institutional-grade application.

(4) Key Risks and Controversies: Founders' Background

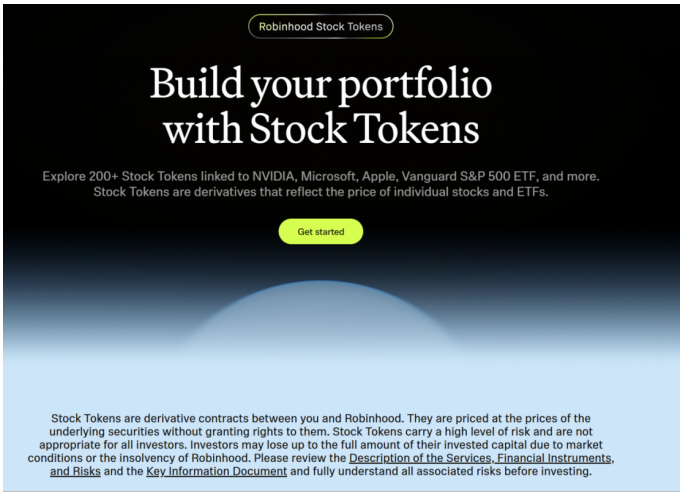
A significant risk point for xStocks lies in the past background of its founding team. According to information disclosed by the crypto community, the core founding team of Backed Finance were previously co-founders of the project DAOStack. After DAOStack raised about $30 million through an ICO in 2018, the project essentially ceased operations in 2020, and its token, GEN, became nearly worthless. This history brings a degree of uncertainty to the long-term credibility of Backed Finance, constituting a reputational risk that potential investors and partners need to carefully evaluate during due diligence.

5.4.2 Robinhood: Seamlessly Bringing Zero-Commission U.S. Stock Trading On-Chain

The well-known online brokerage Robinhood has chosen a path in the tokenized stock sector that is distinctly different from the open approach, focusing on building a vertically integrated, closed ecosystem. Leveraging its compliance license obtained in Lithuania as a cornerstone for entering the EU market, it already offers users over 200 tokenized U.S. stocks and ETF products, with plans to expand to thousands by the end of 2025. On the technical side, its tokens initially run on the Arbitrum network, with plans to eventually migrate to a proprietary Arbitrum-based Layer 2 to improve efficiency. For users, this model offers highly attractive conveniences such as 24/5 trading, zero commissions, and direct dividend payments.

However, in terms of the asset's nature, these "stock tokens" are not equities in the traditional sense. CEO Vlad Tenev has clearly stated that they are blockchain-based derivative contracts designed to track the price of the underlying asset, but investors do not have shareholder rights such as voting (though they do receive dividends). Robinhood claims to hold 1:1 asset reserves to back these derivatives. Building on this, Robinhood's strategy extends beyond mature stocks. Its more groundbreaking move is its expansion into alternative assets, being the first to launch tokenized derivatives for non-public companies like OpenAI and SpaceX (OpenAI has officially clarified it is not

involved in the collaboration), providing users with a unique channel to access high-barrier Pre-IPO assets.



Source: Pharos Research, Robinhood

The most fundamental difference between the Robinhood model and open approaches like xStocks lies in its extreme pursuit of compliance and the strategic trade-offs that result. Robinhood's stock token contracts have strict compliance restrictions embedded in them; every on-chain transfer must be checked against an approved wallet registry (i.e., a KYC/AML whitelist). Any transfer to a non-whitelisted address will be automatically blocked by the smart contract.

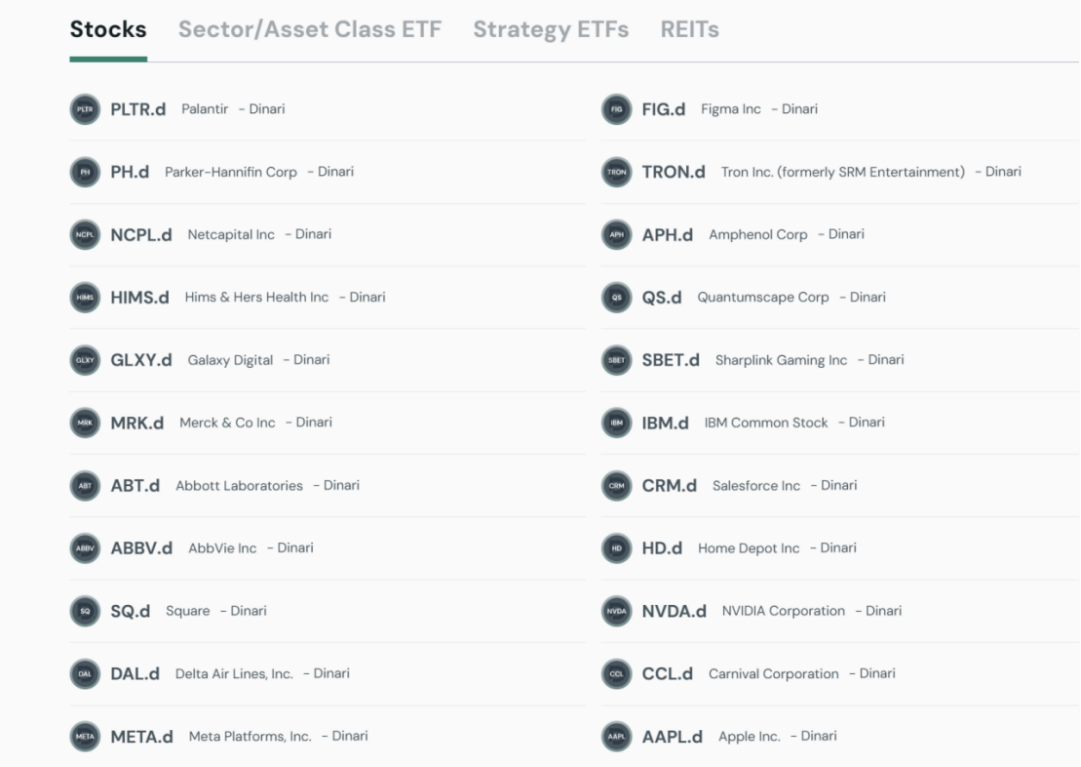
The direct consequence of this design is that its tokenized assets completely sacrifice composability with permissionless DeFi protocols. But this also forms its core moat: by building a fully controllable, highly compliant closed ecosystem, Robinhood can minimize regulatory risks and attract mainstream user groups and Centralized Finance (CeFi) partners who have extremely high compliance requirements. This is a clear strategic choice—to forgo the flexibility of open finance in exchange for access to a larger, compliance-driven market.

5.4.3 Dinari: A Security Token Platform with Key U.S. Licenses

Official Website: https://dinari.com/dshares

Official X Account: https://x.com/DinariGlobal

In the tokenized stock sector, Dinari, by virtue of its "Broker-Dealer" license obtained in the United States, positions itself as a compliance-centric underlying infrastructure service provider, potentially paving the way for the issuance and trading of tokenized stocks within the U.S. Its core product, dShares™, already covers over 100 U.S. stocks and ETFs and has been deployed on Arbitrum and the Ethereum mainnet, demonstrating strong circulation capabilities.



Source: Pharos Research, Dinari

(1) Regulatory Compliance and Licensing Advantages

Dinari's most critical competitive edge stems from its strong regulatory compliance advantages. In June 2025, its subsidiary successfully obtained a "Broker-Dealer" license from the U.S. Financial Industry Regulatory Authority (FINRA), making it the first project platform specifically focused on this business to acquire this key qualification. Additionally, its parent company, Dinari, Inc., is also a "Transfer Agent" registered with the U.S. SEC.

(2) Product Analysis: 1:1 Asset Backing and Rights Structure

Dinari's core product line consists of tokenized securities, dShares™, and a yield-bearing stablecoin, USD+. dShares™ are generally defined as "security tokens," and their operating model is rigorous and transparent: an independent special purpose vehicle (SPV) genuinely purchases the corresponding stocks or ETF assets in the U.S. market, and then issues tokens on the blockchain at a 1:1 ratio. All underlying assets are custodied by a third-party institution and are subject to audits. In terms of shareholder rights, dShares™ holders are entitled to receive dividends from the corresponding stocks, but they do not currently have full shareholder status, such as voting rights.

There has been ongoing debate about the nature of dShares™ products. In EU compliance documents (PRIIP KID), dShares are described as "over-the-counter derivative contracts pegged 1:1 to the underlying asset." Dinari consistently refers to them externally as Tokenized Securities. However, given that they provide dividends and make efforts to satisfy shareholder rights, the market generally

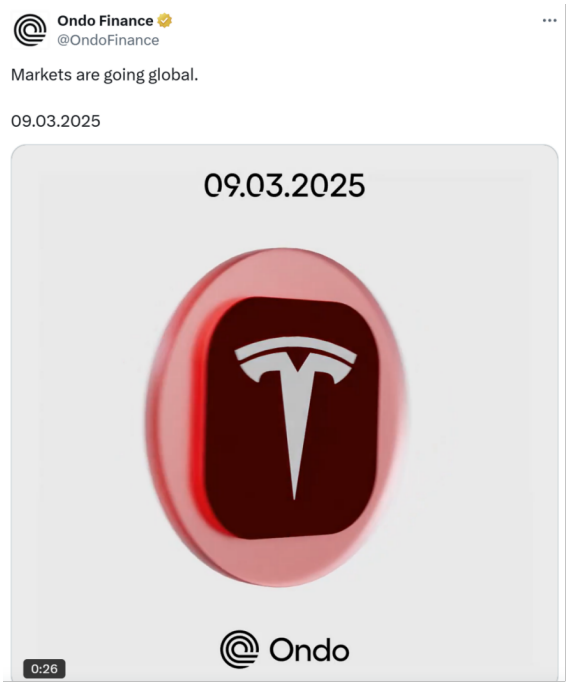
defines them as security-type products, with the compliance terminology (derivative contract/tokenized security) varying slightly by jurisdiction.

In terms of market expansion, Dinari announced a partnership with the Gemini exchange in August 2025, marking its official move from primary market subscription and redemption to a compliant, centralized secondary market. This begins its service to European investors and innovatively introduces an overnight trading session. However, initial market liquidity and scale remain its main challenges. According to RWA.xyz data, even its most popular tokenized MicroStrategy (NASDAQ: MSTR) stock, MSTR.d, currently has a market cap of only about $1.5 million, indicating that the market is still in its early stages of development.

5.4.4 Ondo Finance: An RWA Giant Enters the Tokenized Stock Market

Project Website: https://ondo.finance/

Official X Account: https://x.com/OndoFinance



Source: Pharos Research, Ondo Finance

As the recognized leader in the tokenized U.S. Treasury space, Ondo Finance signaled its determination to enter the tokenized stock market by acquiring the U.S. stock brokerage Oasis Pro in July 2025, thereby obtaining a full set of stock-related licenses. It plans to launch the on-chain U.S. stock trading platform "Ondo Global Markets" on the ETH network on September 3rd, initially offering tokenized products for 100 stocks, with a medium-to-long-term goal of expanding to over a thousand. With its proven execution capabilities and strong brand reputation in the RWA sector, Ondo's entry will pose a formidable challenge to the existing market landscape.

Ondo's strategic layout demonstrates a clear "DeFi-native" orientation and a powerful ecosystem-building capability. On the product level, its platform plans to offer 24/7 stock trading for non-U.S. users and has explicitly stated that its tokenized stocks will be usable as collateral in DeFi protocols, a path distinctly different from closed models like Robinhood's. On the ecosystem level, Ondo has taken the lead in forming the "Global Markets Alliance," with initial members including key players like the Solana Foundation, institutional-grade custodian BitGo, and leading DEX aggregator Jupiter. The alliance aims to jointly establish industry standards for RWA and build a powerful, cross-domain collaborative network.

Ondo's core advantage lies in its established compliance moat and market credibility. By completing the acquisition of Oasis Pro in July 2025, Ondo obtained a full suite of licenses, including Transfer Agent (TA), Broker-Dealer (BD), and Alternative Trading System (ATS), laying a solid foundation for its compliant operations within the United States. A strong brand reputation, a top-tier ecosystem alliance, and a solid set of compliance licenses together form Ondo Finance's core competitiveness, positioning it as one of the most promising giants in the tokenized stock sector.

5.5 Arbitrage Logic and Opportunity Analysis for Tokenized Stocks

The close connection and significant efficiency differences between the tokenized stock sector and the traditional stock market create substantial arbitrage opportunities. Specifically, these opportunities arise from two types of efficiency gaps:

First is the huge liquidity gap: According to RWA.xyz data, as of August 28, 2025, the total market capitalization of all stock tokens was approximately $359 million, a figure that is a mere fraction of the $4.4 trillion market cap of a single stock like NVIDIA (NASDAQ: NVDA). This severe lack of liquidity makes token prices more susceptible to fluctuations when faced with even moderately sized trades. Second is the mismatch in trading hours: the crypto market offers 24/7 continuous trading, whereas traditional stock markets have fixed opening and closing times.

These two core factors combined cause temporary deviations between token prices and the underlying stock prices across different platforms and time periods, thereby offering two different sets of strategies for institutional professionals and individual investors.

5.5.1 Core Arbitrage Strategies for Institutions

Large-scale and effective arbitrage strategies often require high levels of technology, capital, and information access speed, making them more suitable for institutions or professional quantitative teams. Specifically, there are three common types of arbitrage strategies:

- **Cross-Market Hedging Arbitrage:** This strategy capitalizes on the price difference between the token and the spot stock. When both markets are open, if the token price is significantly higher than the spot price, an arbitrageur can buy the spot stock while shorting the corresponding token in the token market. When the price gap narrows, they can close both positions with reverse trades to lock in a profit. This strategy is highly sensitive to trading slippage and fees and requires low-latency, high-frequency automated execution capabilities.

- **Cross-Platform Price Difference Arbitrage:** This is a classic arbitrage model in the crypto market, involving buying a token on a platform where it is cheaper and quickly transferring it to a platform where it is more expensive to sell. The success of this strategy is limited by factors such as on-chain transfer speed, exchange deposit/withdrawal restrictions, and trading pair depth. It usually requires arbitrageurs to pre-position liquidity on multiple platforms and coordinate operations through quantitative programs.
- **Time-Difference Information Arbitrage:** This is the most unique strategy in the tokenized stock market, centered on exploiting the trading time difference between the two markets. The non-trading hours of traditional stock markets (like weekends, pre-market, and post-market sessions) are often when major news (such as corporate earnings, macroeconomic policies) is released. Since stock tokens are tradable 24/7, their prices react to this information before the spot market does. Arbitrageurs can deploy high-performance news monitoring systems to capture significant news during non-trading hours, predict its impact on the stock price, and establish a position in the token market in advance (long on good news, short on bad news). They can then close the position when the traditional market opens and the price reflects the expectation. This arbitrage window is extremely short, often measured in minutes or even seconds, and demands extreme speed in information acquisition and automated trading response.

It is worth noting that issuing platforms themselves usually deploy corresponding anti-arbitrage mechanisms to maintain asset stability. The most common strategy is to strictly peg the primary market minting and redemption of tokens to the actual transaction price and time of the physical stocks in their custody accounts. This mechanism effectively prevents direct counterparty arbitrage against the issuing platform, preventing asset loss due to systemic price differences. Therefore, the most viable application scenario for the above arbitrage strategies, especially the time-sensitive "information arbitrage," is not in the primary market through minting/redemption operations against the platform, but in the platform's own DEX or other secondary markets where the token can be freely traded.

5.5.2 Core Value Proposition for Retail Investors

Although complex arbitrage strategies are not the main playground for ordinary investors, the emergence of tokenized stocks has fundamentally improved the experience for retail investors participating in global high-quality asset investments. Its core value proposition is reflected in the following three aspects:

- **Lowering Investment Barriers (Fractional Investing):** Traditional U.S. stock markets typically have a minimum trading unit of 1 share. For high-priced stocks like Google or Tesla, the entry barrier for ordinary investors is quite high. Tokenization technology allows for the "fractionalization" of stocks, enabling users to buy as little as 0.1 or even 0.001 of a share, achieving true "proportional ownership" and greatly enhancing investment inclusivity.
- **Improving Market Accessibility (24/7 Trading):** Breaking free from the trading hour restrictions of traditional stock markets, the 24/7 trading mechanism gives retail investors unprecedented flexibility. Investors can enter and exit the market at any time, react instantly to sudden events in any time zone, and flexibly allocate assets across time zones and asset classes, effectively mitigating regional risks.

- **Enhancing Settlement and Capital Efficiency (T+0 Settlement):** Traditional securities trading follows a T+2 settlement cycle, where funds and securities take two business days to settle. This ties up a significant amount of capital and introduces settlement risk. Tokenized stocks, on the other hand, achieve near-real-time (T+0) atomic settlement based on blockchain technology, where the trade is the final settlement. This model not only greatly improves capital utilization efficiency but also fundamentally reduces counterparty risk in the clearing process, demonstrating a structural advantage over the underlying architecture of traditional finance.

However, there are still cautious views in the market regarding whether tokenized stocks can fundamentally improve the geographic liquidity of traditional equity assets. Although in theory, stock tokenization breaks down geographical barriers, allowing high-quality assets like U.S. stocks to circulate globally, its contribution to the liquidity of the stock market itself is still limited at this stage. This is mainly due to two core realities:

First, users who are currently proficient in on-chain investing often have the knowledge and operational skills to invest directly in U.S. stocks through other channels, meaning the two investor groups largely overlap. Second, and more critically, there is a huge scale disparity between the two markets—the multi-trillion-dollar market capitalization of global stock markets is far beyond what the current crypto market can compare to. This means that liquidity transmission is currently one-way: traditional assets bring value to the crypto world, not the other way around. Of course, this asymmetrical landscape may change in the future as the digital asset market evolves.

In summary, by enabling "fractional ownership," "24/7 trading," and "low-cost circulation," tokenized stocks systematically address the three major pain points that retail investors face in traditional markets: capital barriers, time constraints, and trading friction. This is essentially a profound empowerment of individual investment rights.

5.6 Outlook for Stock Tokenization Trends

Looking ahead, the tokenized stock sector is evolving along two overlapping but likely coexisting paths, with an increasingly strict compliance framework as their common foundation.

The first path is the "compliant walled garden" model, represented by Robinhood. The vision for this model is to rely on the issuer's own broker-dealer license to provide a vertically integrated service from issuance and trading to settlement within a self-built or controllable blockchain environment (such as an L2). Its key advantage is that it maximizes the compliance of business processes. By embedding KYC/AML into the smart contract layer, it creates a closed but secure environment that is more easily accepted by mainstream users and regulators. However, the trade-off is the sacrifice of composability with the broader DeFi world, as the tokenized assets cannot be freely used in permissionless protocols.

The second path is the "open financial bridge" model, represented by xStocks (Backed Finance). This model chooses to issue standardized tokens on high-performance public chains like Solana, aiming to leverage the native advantages of blockchain for deep integration with DeFi modules such as decentralized exchanges (DEXs) and lending protocols. This approach seeks to maximize the

liquidity and capital efficiency of the assets. While this path is more aligned with the open spirit of the crypto world, it also faces greater regulatory uncertainty at the current stage, often requiring measures like geographic restrictions (e.g., excluding U.S. users) to mitigate potential legal risks.

Ultimately, regardless of the path taken, solving the problem of insufficient liquidity depth remains the core challenge for the future development of the entire sector. Only when the market size is large enough to support institutional-grade depth and low trading slippage can its value as an efficient trading medium be fully realized. At the same time, product innovation will continue to deepen, expanding from the current mainstream blue-chip stocks to Pre-IPO company derivatives, structured products, and even more diverse alternative assets, providing global investors with an unprecedented, around-the-clock value transfer network.

06 / Conclusion

After an in-depth analysis of the core sectors of RWA, a clear industry blueprint emerges, one where a grand narrative coexists with structural challenges. Currently, credit-based assets, represented by private credit and U.S. Treasuries, have become the absolute main drivers of market growth, thanks to their clear cash flows and yield structures. However, regardless of the asset class, all face three fundamental bottlenecks: the challenge of bridging the "mapping gap" between on-chain digital tokens and off-chain legal rights, the widespread "liquidity dilemma" in secondary markets, and the persistent uncertainty of the "compliance framework."

These challenges are collectively pushing the RWA sector from a technology-driven "first half" into a "second half" defined by institutional demand and regulatory compliance. As a result, the market is showing a clear "dual-track evolution": on one side is the "walled garden" model, which prioritizes compliance at the expense of composability, aiming to attract and serve traditional financial participants; on the other is the "bridge" model, which embraces open finance and seeks deep integration with DeFi, but must navigate carefully in the gray areas of regulation.

Ultimately, we must recognize that the true value of RWA is not as a short-term speculative tool, but as a long-term endeavor to build the next generation of financial infrastructure. Its success will not be determined by the temporary fluctuations of token prices, but by the steady growth of on-chain asset scale, the effective deepening of secondary market liquidity, and the solid strengthening of legal and technical frameworks. This path is undoubtedly full of challenges, but its destination—a more transparent, efficient, and inclusive global financial system—makes it the most worthwhile frontier for the entire industry to pursue.

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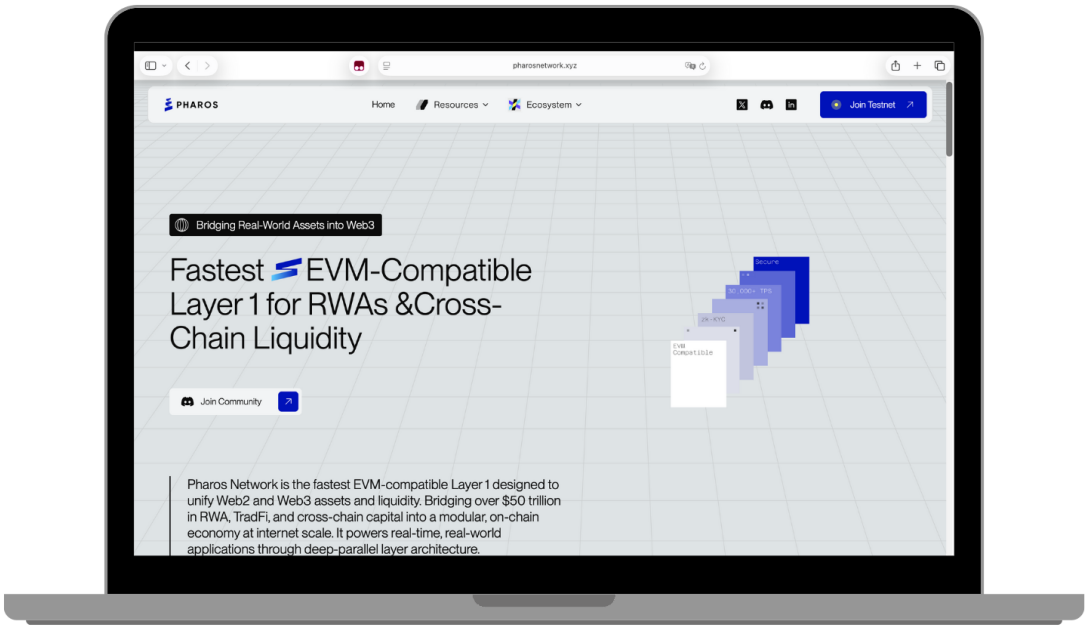

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