

# **State of Real-World Assets (RWA)**

**From Permission to Practice: Institutional Deployment,  
Asset Allocation, and the HNW Opportunity**

Building the Next Generation of Institutional-Grade  
Digital Asset Infrastructure

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# Executive Summary

The question facing institutional participants in 2026 is no longer whether real-world assets (RWA) will achieve mainstream adoption - it is how quickly the operational infrastructure required to support that adoption can be built. Regulatory frameworks across the United States, European Union, and Asia-Pacific have reached a critical inflection point: the GENIUS Act, CLARITY Act, and MiCA collectively establish the first coherent global architecture for compliant tokenized asset issuance and distribution. Yet onchain RWA TVL - while surging nearly fivefold from \$6 billion in early 2025 to \$24.6 billion by April 2026 - still represents a fraction of addressable institutional capital. The deployment gap between regulatory permission and institutional-scale execution remains wide.

This report examines that gap across five dimensions. The asset class landscape has matured into a multi-tiered yield spectrum: tokenized U.S. Treasuries serve as the base layer with 4–5% annualized yields and T+0 liquidity, while tokenized private credit offers 8–12% returns for investors willing to accept credit risk, and tokenized commodities - led by gold tokens with \$5.4 billion in total market cap - provide inflation hedging with 24/7 price discovery. BlackRock's BUIDL fund, now exceeding \$2.4 billion in AUM, illustrates the 12x growth potential of institutional-grade products when brand trust, compliant custody architecture, and DeFi integration converge.

For high-net-worth clients, the opportunity is disproportionately large relative to current product availability. The global HNW and UHNW population holds approximately \$90 trillion in investable assets; a 5% allocation to tokenized RWA would represent more than 160 times the current total market size. Declining minimum investment thresholds - Hamilton Lane's tokenized private equity fund starts at \$10,000 - and T+0 redemption mechanics are fundamentally altering the accessibility equation for sophisticated non-institutional investors.

The infrastructure layer remains the binding constraint. Liquidity fragmentation across chains, the absence of unified custody standards, unresolved legal enforceability questions, and gaps in institutional-grade reporting continue to slow deployment even where regulatory permission exists. The institutions positioned to capture long-term value are those treating RWA not as a speculative experiment, but as a structural upgrade to financial infrastructure - one requiring the same discipline in compliance, risk management, and operational excellence that defines traditional asset management.

This report draws on contributions from Dune, RedStone, and Optimism - providing onchain data, L2 infrastructure, and oracle layer perspectives that ground the analysis in current market realities.

# About This Report

## BitMart

[BitMart](#) is a globally licensed cryptocurrency exchange serving institutional and retail clients across 180+ countries. As part of its commitment to advancing institutional-grade digital asset infrastructure, BitMart's Strategic Research function initiated and coordinated this report to provide a rigorous, cross-industry perspective on the evolving RWA landscape. BitMart does not provide investment advice; this report is intended for informational and educational purposes only.

## Co-Authors & Contributors

This report was developed in collaboration with industry participants across digital asset infrastructure, investment, and tokenized financial markets. Contributing organizations provided market insights, regulatory perspectives, and practical observations based on their operational experience in RWA-related sectors.

## Dune

[Dune](#) is the data platform that makes blockchain data available. Extensive coverage, curated verticals, and multiple distribution methods - Dune app, API, data share - designed to fit institutional workflows and use cases.

## RedStone

[RedStone](#) is the data layer for institutional DeFi, delivering secure, low-latency price feeds for digital assets, RWAs, stablecoins, LSTs, LRTs, and Bitcoin LSTs across 110+ chains. Trusted by 200+ clients including Securitize, Morpho, Pendle, Spark, Ether.fi, Ethena, Lombard, Venus, and Compound, RedStone powers lending, stablecoins, perpetuals, and tokenized asset markets with a custom pricing infrastructure built for complex onchain systems. RedStone is the primary oracle for tokenized products including BlackRock's BUIDL, Apollo ACRED, and Hamilton Lane SCOPE.

## Optimism

[Optimism](#) is a blockchain infrastructure provider that enables developers and enterprises to launch scalable, secure, and customizable networks and applications. Its open source OP Stack delivers Ethereum-grade security, near-zero transaction costs, and the flexibility to meet business and regulatory needs at scale. Optimism serves fintechs, payment providers, institutions, and crypto companies building the next generation of onchain products.

# Chapter 1 The Deployment Gap: From Regulatory Clarity to Capital Allocation

Every emerging asset class must bridge a specific gap between regulatory permission and institutional-scale deployment - and the length of that gap is often a more reliable indicator of market evolution than the completeness of the legal framework on paper. RWA tokenization sits in the middle of that gap today. The regulatory architecture has taken initial shape, but the 'middle-layer infrastructure' required to translate it into tens or hundreds of billions of dollars in institutional deployment - custody, liquidity, execution, and reporting - remains under construction. This chapter systematically examines the structure, causes, and critical breakthrough points of this gap.

## 1.1 The Institutional RWA Adoption Curve: Three Phases from 2024 to 2026

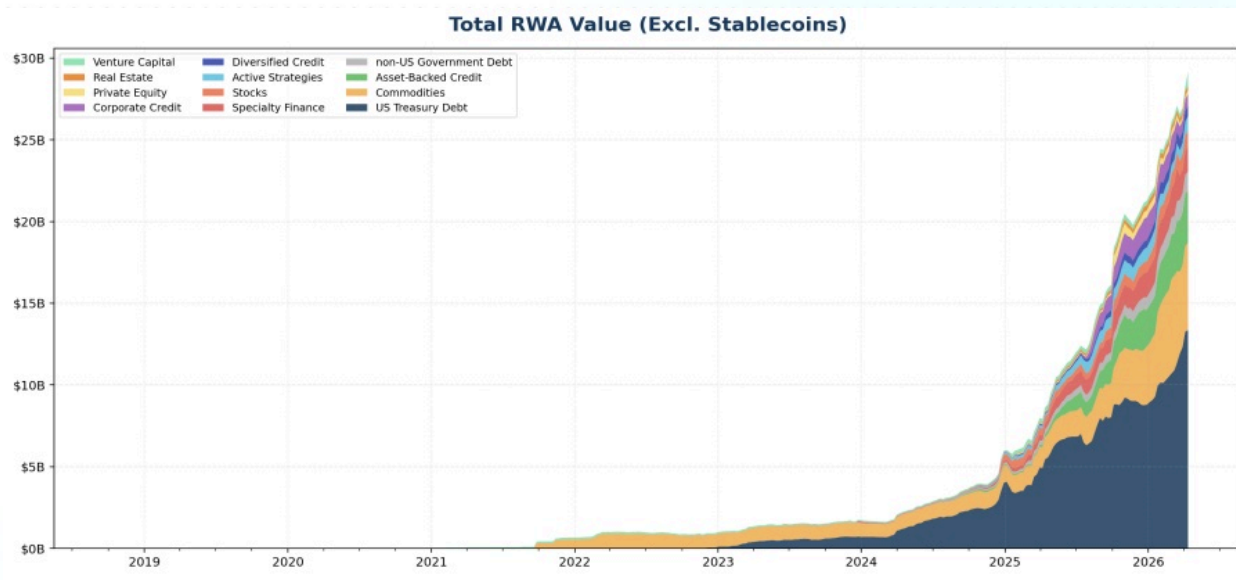
Looking back over the past three years, institutional attitudes toward RWA have undergone a clear three-phase transformation, each defined by landmark events and measurable data milestones.

2024 was the Proof-of-Concept Year. BlackRock launched the USD Institutional Digital Liquidity Fund (BUIDL) on the Securitize platform - the first tokenized U.S. Treasury fund issued by a top-tier asset manager - with an initial size of just \$200 million. Franklin Templeton expanded its onchain U.S. Government Money Fund (BENJI) from Stellar to Polygon and Arbitrum, establishing a multi-chain distribution precedent. The DTCC announced a tokenized securities pilot in partnership with Canton Network, marking the first time the core clearing infrastructure of U.S. capital markets took blockchain technology seriously. Market growth that year was modest - expanding from roughly \$5 billion at the start of the year to approximately \$6.6 billion by year-end - reflecting that institutions were still in a 'watch and learn' phase.

2025 was the Regulatory Foundation Year. It was the most consequential year in the history of RWA tokenization, as three major financial jurisdictions completed foundational legislation in rapid succession. In the United States, the Guiding and Establishing National Innovation for U.S. Stablecoins Act (GENIUS Act) was signed into law by President Trump on July 18, 2025 - the first federal law in U.S. history specifically regulating a sub-sector of crypto assets. In the European Union, the core provisions of the Markets in Crypto-Assets Regulation (MiCA) entered into full effect on December 30, 2024. In Asia-Pacific, Hong Kong's Stablecoin Ordinance was passed by the Legislative Council on May 21, 2025, becoming the world's first complete legislative framework dedicated to stablecoin regulation. The enactment of these three legal architectures created clear compliance pathways for institutional deployment in 2026.

2026 is the Deployment Year. The data tells a dramatic story: total onchain RWA TVL (excluding stablecoins) surged from approximately \$6 billion at the start of 2025 to roughly \$24.6 billion by April 2026 - a nearly fivefold increase driven by the systematic entry of institutional capital. BlackRock BUIDL grew from approximately \$500 million AUM at the start of the year to \$2 billion by mid-March, completing the leap from 'symbolic allocation' to 'substantive holding.' Ondo Finance's OUSG and USDY combined exceeded \$2.5 billion. Yet the other side of the

picture remains: penetration is still extremely low. Of the \$21 trillion U.S. Treasury market, only approximately \$13.3 billion has been tokenized - a penetration rate of just 0.063%. Even at current growth rates, tokenized Treasuries reaching 1% penetration of the outstanding market (approximately \$210 billion) will require several more years.



Source: [RWA.xyz](https://www.rwa.xyz)

## 1.2 What 'Ready to Deploy' Means - The Fundamental Difference Between Institutions and HNW Clients

When institutions prepare to deploy into RWA, a critical distinction must be drawn between two core participant types: traditional institutional allocators and high-net-worth (HNW) clients. The two groups differ systematically in regulatory requirements, risk appetite, liquidity needs, reporting standards, and tax structures - and it is generally not feasible to serve both with a single product design.

For traditional institutional allocators (pension funds, sovereign wealth funds, insurance companies, bank proprietary books), readiness to deploy means institutional conditions are fully in place: first, a clear compliance framework that satisfies investment policy statement (IPS) requirements for asset classification and custody; second, a mature custody infrastructure relying on regulated qualified custodians (such as traditional prime custodians or licensed digital asset custodians); and third, reliable liquidity mechanisms with predictable redemption capacity under stress scenarios.

The logic for HNW clients is different. According to Long Angle's 2026 research, 94% of HNW investors already have allocations to private and alternative assets, and traditional 60/40 portfolios are evolving toward structures dominated by 'equities plus alternatives' - indicating a higher tolerance for lock-up periods, liquidity discounts, and complex structures.

Source: [Long Angle - High-Net-Worth Asset Allocation 2026](#)

The CFA Institute's 2026 report further shows that more than half of younger HNW and ultra-high-net-worth individuals are driven by FOMO to participate in emerging assets such as

crypto and tokenized products. This means that for HNW clients, a product's narrative quality and perceived scarcity are often more compelling than pure risk-adjusted returns - a sharp contrast to the compliance-and-stability-first allocation logic of institutional investors.

*Source: CFA Institute - Next Generation Investors Report 2026*

### **1.3 The Four Barriers Still Slowing Capital Deployment**

The four major barriers are fundamentally 'last-mile' standardization problems, not underlying technology limitations. The blockchain and regulatory frameworks are largely in place, but the middle layer - custody standards, cross-chain liquidity, compliance reporting, and institutional services - remains under construction. This phase represents a critical infrastructure window: the standards being established now may emerge as industry defaults over the next three to five years.

#### **Barrier 1: Liquidity Fragmentation**

Current RWA tokens are distributed across Ethereum, Stellar, Avalanche, Solana, Polygon, Arbitrum, Base, Canton, and other networks, with further fragmentation within each chain across different issuers and trading venues. Daily trading volume for individual products frequently falls below \$1 million - far below traditional bond market levels. Even BlackRock BUIDL has noticeably insufficient secondary market liquidity, with institutional redemptions still relying on the primary market. The solution path lies in cross-chain interoperability protocols such as Chainlink CCIP, Circle CCTP, and LayerZero - but achieving institutional-grade 'frictionless settlement' is still two to three years away. In the interim, the DTCC and Canton Network model offers an alternative combining centralized clearing with blockchain infrastructure.

#### **Barrier 2: Absence of Custody Standards**

RWA custody has evolved from 'private key safekeeping' to 'full lifecycle management,' encompassing corporate action execution, compliance pass-through, and integration with traditional accounts. No unified standard yet exists: traditional custodians are advancing their digital asset capabilities but onchain operations remain limited; onchain native custody technology is technically mature, but the determination of 'qualified custodian' status is inconsistent. Firms like Anchorage are attempting to bridge both tracks, but the overall landscape remains early-stage. The legal interpretation of 'private key equals control' remains unclear across major jurisdictions.

#### **Barrier 3: Legal Enforceability**

Smart contract execution is not equivalent to legal enforceability. When defaults, liquidations, cross-border claims, or regulatory freezes occur, how to ensure that 'onchain rights equal legal rights' remains a core unresolved question. The MakerDAO RWA case illustrated the conflict between DAO governance and traditional legal obligations. Although the United States, Cayman Islands, Luxembourg, and others have begun improving their legal frameworks for DAOs and tokenized structures, the overall landscape remains immature. The current mainstream solution is a 'hybrid architecture': onchain tokens represent economic rights while legal rights are held by an SPV or trust - at the cost of full onchain efficiency.

## Barrier 4: Institutional-Grade Reporting and Audit

Onchain transparency does not directly satisfy institutional requirements for GAAP/IFRS reporting, audit, and tax compliance - middleware is needed for standardized conversion. In 2024–2025, Chainalysis, Elliptic, TRM, Coin Metrics, and others provide compliance tools, and the Big Four accounting firms have established digital asset audit teams. However, for complex multi-chain, multi-jurisdiction products, standards remain incomplete - causing institutions that are permitted by compliance to nonetheless delay deployment due to internal process constraints.

### 1.4 The Tokenization-vs-Composability Gap: An onchain View

The four barriers described in Section 1.3 - fragmented liquidity, custody standards, legal enforceability, and institutional reporting - are visible in aggregate onchain. Per recent Dune research, of the roughly \$27 billion in RWAs tokenized as of April 2026 (per Dune's methodology, which includes a broader set of tokenized asset categories than the \$24.6 billion TVL figure cited in Section 1.1), only about \$2.7 billion (roughly 10%) is actively deposited as collateral in DeFi lending markets across Morpho, Aave (including Horizon), Kamino, and Fluid. The remaining 90% sits in wallets, performing the function of a yield-bearing balance rather than a productive financial asset. The trajectory, however, is steep: that \$2.7 billion barely existed twelve months ago, mirroring the broader fivefold growth in onchain RWA TVL described in Section 1.1.

*Source: Dune - The Rise of Composable RWAs*

#### What Gets Tokenized Is Not What Gets Used

The composition of tokenized AUM and DeFi deposits is almost inverted. Tokenized Treasuries, often considered the "base layer" of the onchain ecosystem, account for 48.5% of tokenized AUM (\$13.2 billion) but just 2% of DeFi lending deposits. Tokenized credit, on the other hand, accounts for 17% of AUM but roughly 80% of deposits. Commodities are 25.2% of AUM but barely 1% of deposits.

The economics explain the divergence. Maple's syrupUSDC yields roughly 6%, while T-Bills offer about 3.5%. When collateral earns 6% and stablecoin borrowing costs sit around 3%, positive carry is achievable, and curators such as Gauntlet and Steakhouse can build explicit looping strategies on top: post the RWA, borrow against it, buy more. Tokenization rewards the safety and familiarity that make Treasuries attractive to institutional balance sheets. Composability rewards a different set of qualities: yield spreads and leverage economics.

#### The Collateral Mix Is Shifting in Real Time

The dominance of high-yield credit may be partly a function of timing. Aave Horizon offers the clearest evidence: when the venue launched in August 2025, USCC (Superstate's Crypto Carry Fund) delivered roughly 15% APY and accounted for 93% of all RWA collateral, while T-Bill products were listed but ignored. As crypto markets cooled, basis spreads narrowed and USCC's yield compressed to roughly 4%, converging with T-Bill yields. USCC's share dropped to 67%, while USTB surged from under \$1 million to \$45.6 million in 30 days - a 570% increase. As credit yields compress market-wide, the collateral mix across all venues is likely to diversify, with risk profile, regulatory comfort, and settlement mechanics mattering more than yield alone.

Two emerging categories illustrate where that diversification is heading. Reinsurance accounts for \$324 million in tokenized AUM but \$261 million in DeFi deposits - roughly 80% of all tokenized reinsurance is actively composable, the highest deposit rate of any asset class by a wide margin. Tokenized equities are also live onchain, with xStocks markets on Kamino holding \$21 million across seven tokenized equities and Centrifuge's deSPXA reaching \$3.6 million in TVL.

### **Distribution Through Permissionless Access**

Section 1.3 identifies liquidity fragmentation as a primary barrier, but the onchain data suggests integration design matters more than chain count. Maple's syrupUSDC and syrupUSDT are permissionless ERC-20 tokens requiring no KYC, no whitelist, and no partnership to integrate. The result: 98% of syrupUSDT on Plasma and 99% of syrupUSDC on Base are actively deployed on Aave, Morpho curators have independently built leveraged vaults around Syrup, and the asset has reached \$161 million on Kamino. Maple distributed roughly \$1 billion across four chains organically.

Centrifuge represents the institutional end of the RWA spectrum, with nearly \$2 billion in tokenized AUM across products like JTRSY, JAAA, Apollo's ACRDX, and the recently launched SPXA. These are permissioned, regulated products designed for institutional balance sheets, with natively composable wrappers (deRWA) introduced in September 2025 to extend distribution into DeFi. Early integrations are visible - Resolv on Horizon, Falcon Finance, Grove on Avalanche - and confirm that the path from tokenized to composable exists. It runs in parallel to the permissionless model, on a different timeline.

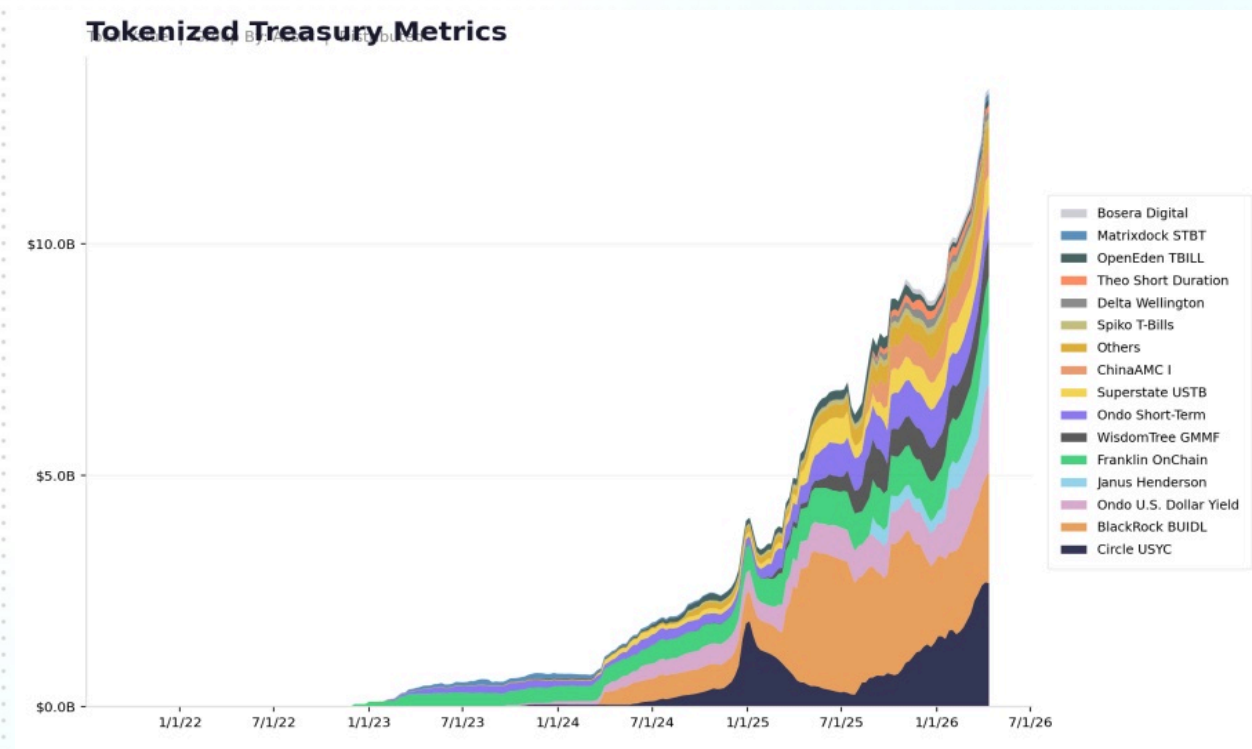
### **Implication**

The deployment gap identified across regulation, custody, and reporting has a measurable onchain counterpart. Closing it requires not only the middleware described in Section 1.3, but also product designs that make tokenized assets composable by default: usable as collateral, integrable into lending markets, and priceable by oracles in real time. The institutions that solve composability, rather than tokenization alone, are best positioned to define the next phase of RWA growth.

## **Chapter 2 The Asset Class Landscape: Where Institutions Are Allocating**

If Chapter 1 answered 'why institutions have not yet deployed at full scale,' Chapter 2 answers 'where institutions are actually putting their money.' Through a deep examination of five major RWA asset classes, this chapter constructs a complete 'risk-return-liquidity' allocation spectrum and provides institutional and HNW clients with a clear asset classification framework. Each asset class is analyzed across four dimensions: market size data, key participants, yield-risk characteristics, and operational requirements.

## 2.1 Tokenized U.S. Treasuries and Money Market Instruments: The Base Layer



Source: [RWA.xyz - Tokenized Treasuries](#)

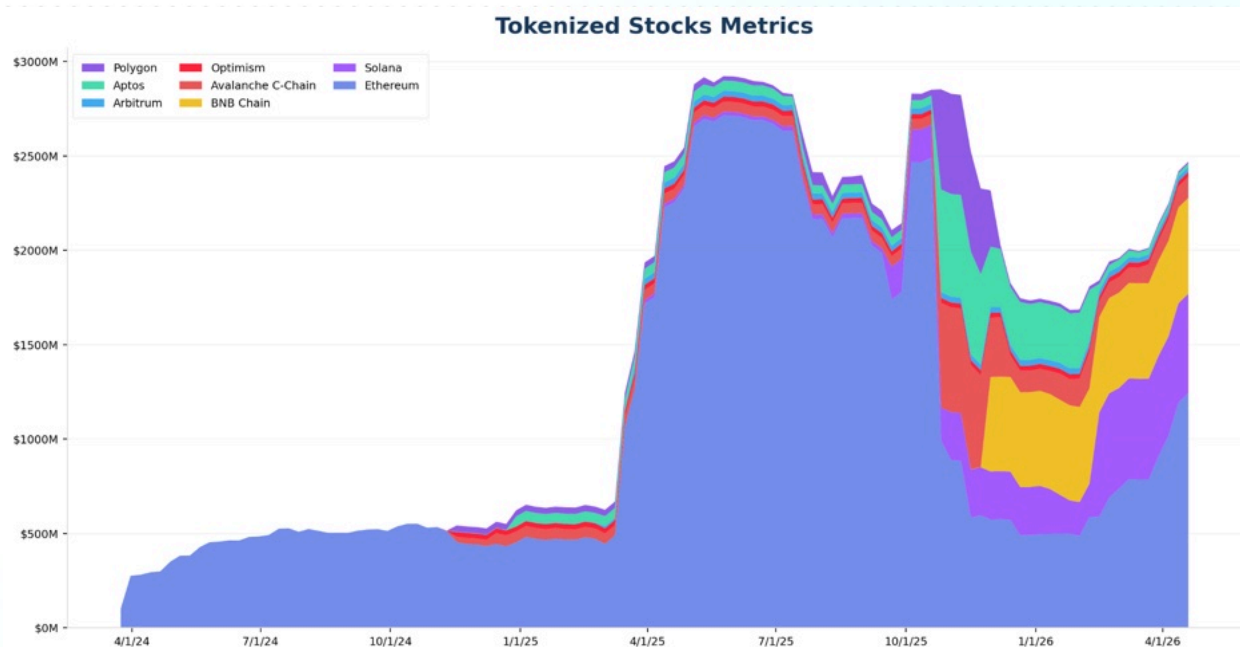
Tokenized U.S. Treasuries have become the 'base layer' of the entire RWA tokenization ecosystem. The significance of this positioning lies not only in market size, but in its provision of a 'risk-free rate anchor' for onchain capital - DeFi protocols, onchain asset management products, and institutional cash management all require a low-risk, highly liquid underlying asset for pricing and benchmarking. In the traditional financial system, U.S. Treasuries serve exactly this role. In the onchain ecosystem, tokenized Treasuries are taking on this structural function.

According to [rwa.xyz](#) data, the current market size of onchain 'Tokenized Treasuries' is approximately \$1.3–1.4 billion. This figure primarily covers products that directly map short-term Treasury yields into onchain tradeable tokens via SPV or fund structures (such as Ondo, Franklin Templeton, and Hashnote). It is worth noting that this definition does not fully capture all 'Treasuries onchain' assets, but focuses on asset-backed tokens that can circulate onchain.

### Deep Dive: BlackRock BUIDL

From a broader perspective, if tokenized money market funds are included in the count, the overall market size expands significantly. The latest data shows that BlackRock's BUIDL fund surpassed \$2.4 billion in AUM in April 2026, making it the world's largest single tokenized RWA fund. The fund invests in short-term U.S. Treasuries, Treasury-collateralized repurchase agreements, and cash - with each BUIDL token representing a fund share targeting a net asset value of \$1.00. BUIDL's \$2.4 billion milestone represents a 12-fold increase from its \$200 million

initial size at launch in under two years - a growth rate that is exceptionally rare for an institutional-grade financial product.



Source: [RWA.xyz](https://www.rwa.xyz/) - BUIDL

BUIDL's success is not coincidental. A close examination of its product design and business model reveals several key factors behind the success of institutional-grade RWA products:

First, the decisive value of brand trust. As the world's largest asset manager with over \$11 trillion in AUM, BlackRock's brand itself serves as the strongest compliance endorsement. When the tokenized Treasury market was crowded with technology startups and crypto-native projects, BlackRock's entry instantly elevated the entire category from an 'in-group crypto product' to a 'mainstream allocation validated by Wall Street.' This brand premium is visible in the data: BUIDL drove 92% of tokenized Treasury market growth in 2025, with nearly all new institutional capital flowing to BUIDL.

Second, the rigor of the compliant custody and issuance architecture. BUIDL uses BlackRock as investment adviser, BNY Mellon as custodian and administrator, and Securitize as the token issuance platform and transfer agent. This tripartite architecture ensures that each critical function is handled by a regulated, long-tenured compliant institution - investment management by an SEC-registered asset manager, custody by a top-tier bank, and token issuance by a fintech firm holding transfer agent registration. This structure allows institutional clients to apply their existing compliance review frameworks, significantly reducing internal approval friction.

Third, the multi-chain deployment and DeFi integration strategy. BUIDL launched initially on Ethereum, then expanded to Aptos, Arbitrum, Avalanche, Optimism, and Polygon. In November 2025, BlackRock partnered with Binance to accept BUIDL as onchain collateral for derivatives trading, further expanding its onchain utility. This positioning reveals that BlackRock's strategic intent for BUIDL is not merely a 'tokenized money market fund' - it is positioned as an 'onchain U.S. dollar equivalent': a multi-functional asset that can both generate yield and serve as

collateral. This functional extensibility is something traditional money market funds cannot achieve within the traditional financial system.

### Market Structure and Key Participant Comparison

| Issuer             | Product       | AUM (Q1 2026) | Annual Yield | Custodian             | Primary Blockchain(s) |
|--------------------|---------------|---------------|--------------|-----------------------|-----------------------|
| BlackRock          | BUIDL         | \$2.0B+       | 4.0%–4.5%    | BNY Mellon            | Ethereum + 6 chains   |
| Ondo Finance       | USDY          | \$1.4B        | ~3.55%       | Clear Street / Ankura | Ethereum, multi-chain |
| Ondo Finance       | OUSG          | \$692M        | ~3.49%       | Clear Street / Ankura | Ethereum, multi-chain |
| Franklin Templeton | BENJI (FOBXX) | \$800M+       | ~4.2%        | Franklin proprietary  | Stellar + 7 chains    |
| Hashnote           | USYC          | \$500M+       | ~4.3%        | State Street          | Ethereum              |
| OpenEden           | TBILL         | \$300M+       | ~4.2%        | StoneX                | Ethereum, Avalanche   |

Source: [RWA.xyz - Tokenized Treasuries Overview](#)

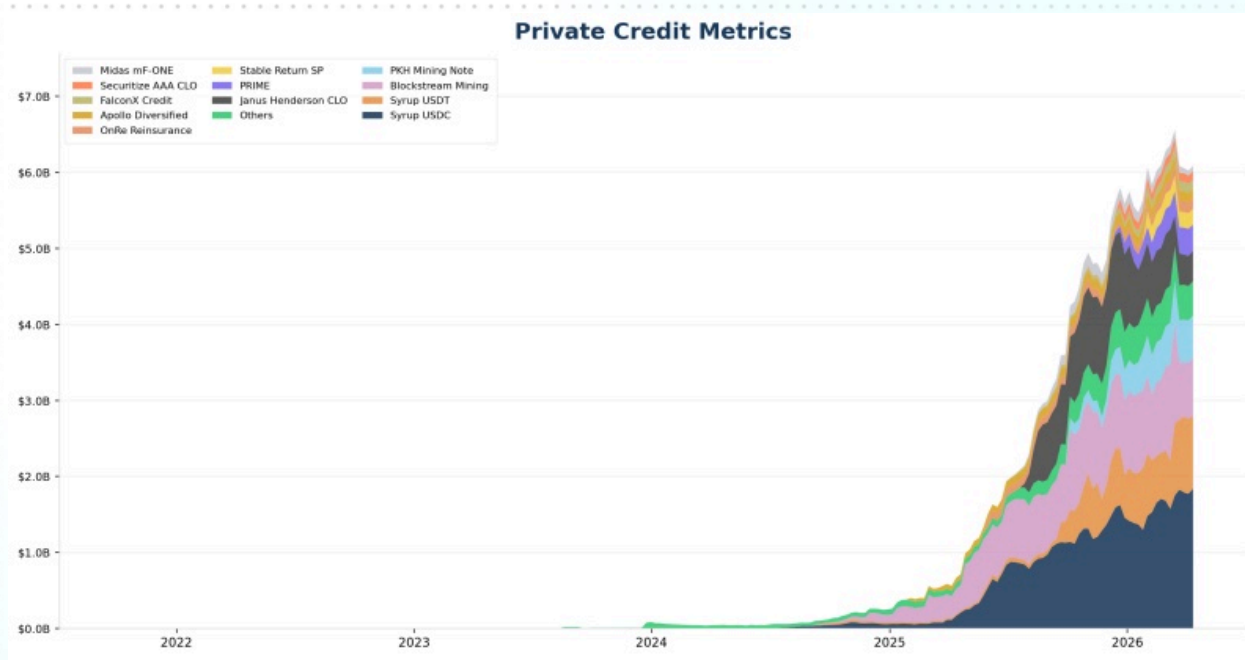
Several key characteristics of the tokenized Treasury market emerge from the structural comparison above. First, custodian diversity: from top-tier traditional banks such as BNY Mellon and State Street, to emerging institutional custodian platforms like Clear Street and Ankura, to diversified options including StoneX and Franklin's proprietary custody - reflecting that the market remains in the early stages of custodian standardization. Second, yield convergence: all products offer annual net yields concentrated in the 3.5%–4.5% range, with differences primarily driven by management fee levels and underlying asset duration management. This indicates that competition in the tokenized Treasury market has shifted from 'who can do it' to 'who has stronger distribution and DeFi integration.' Third, multi-chain deployment: Ethereum remains the preferred deployment chain, but ecosystems including Solana, Avalanche, Polygon, and Stellar are gaining increasing share, reflecting issuers' strategic consideration of 'avoiding single-chain lock-in.'

## 2.2 Private Credit: Bridging the Risk-Free Rate and Credit Spreads

If tokenized Treasuries are the 'entry product' of the RWA ecosystem, tokenized private credit is the 'yield enhancement engine.' According to the latest data, the tokenized private credit market stands at approximately \$6.09 billion. Annualized yields on major platforms are concentrated in the 8%–12% range - significantly above the 3.5%–4.5% of tokenized Treasuries. For investors willing to accept some credit risk, this yield premium provides a clear economic incentive.

The strategic logic of private credit tokenization can be understood from both supply and demand sides. On the supply side, the global traditional private credit market is approximately \$1.7 trillion in size, but it suffers from three structural pain points: insufficient liquidity (funds typically have 5–10 year lock-up periods), extremely high access thresholds (typical minimum investment of \$5 million), and limited transparency (holdings and valuation information are only disclosed internally within funds). These three pain points are precisely what tokenization

technology can systematically address. On the demand side, following the rise in private credit default rates during the 2022–2023 cycle, sophisticated investors have developed a significantly heightened appreciation for 'liquidity premium.' If tokenization can convert a private credit position traditionally locked up for five years into a liquid asset transferable within hours, the liquidity premium is sufficient to attract institutional and HNW allocation - even if the underlying yield of the tokenized product is slightly lower than traditional offerings.



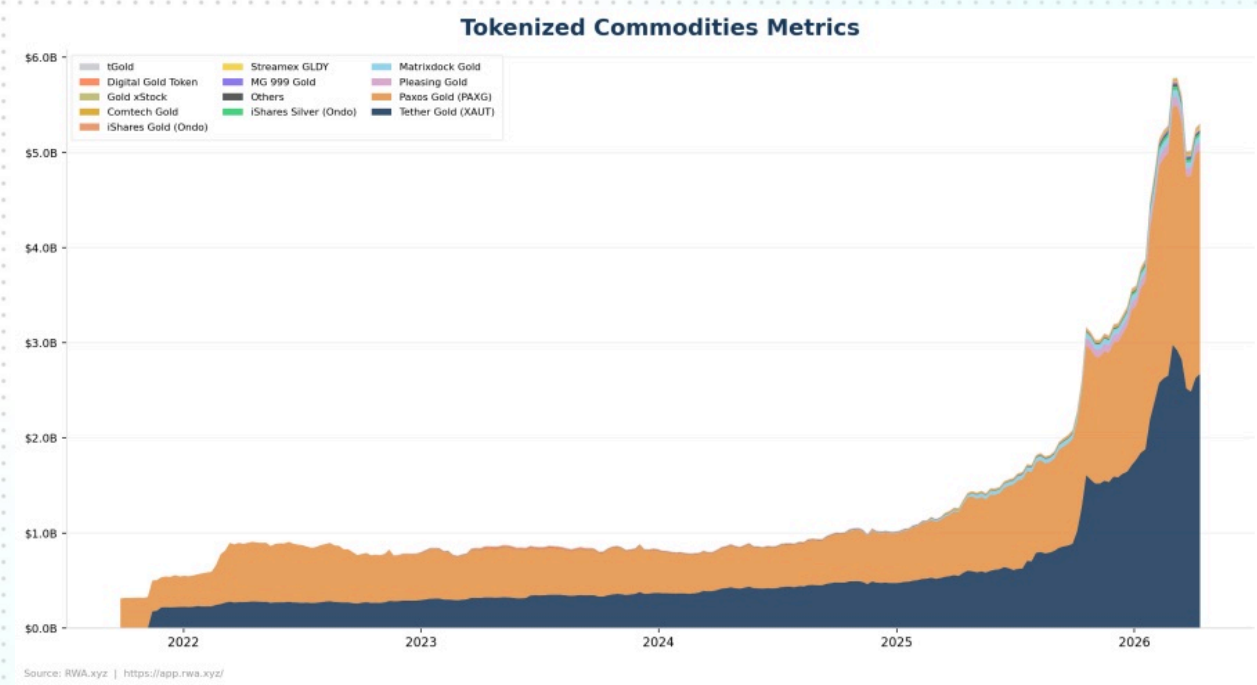
Source: [RWA.xyz](https://www.rwa.xyz/) - Private Credit

The greatest structural risk facing tokenized private credit is not the default rate, but the transparency paradox in credit risk pricing. Information asymmetry in the traditional private credit market is viewed by participants as a 'feature' rather than a 'flaw' - it allows fund managers with informational advantages to capture excess returns, constituting the core logic that has attracted LP capital to private credit funds for decades. When the credit process moves onchain and becomes transparent, information asymmetry is eroded and excess returns may be compressed. This may push platforms to migrate toward more complex structured products to maintain spreads. The second half of 2026 is therefore expected to see the emergence of 'second-generation' tokenized credit products with significantly upgraded complexity and risk pricing mechanisms.

### 2.3 Tokenized Commodities: Gold-Anchored Expansion

The tokenized commodities market has experienced explosive growth over the past two years. According to the latest data, the total market capitalization of tokenized commodities is approximately \$5.41 billion, with gold-backed tokens holding an overwhelming dominant position - Tether Gold (XAUT) leads with \$2.78 billion in market cap, followed closely by Pax Gold (PAXG) at \$2.4 billion, together accounting for over 70% of the tokenized commodities market. This growth is closely tied to the global macro environment. The continuing

de-dollarization trend in 2025–2026, escalating geopolitical uncertainty, systematic increases in central bank gold reserves, and spot gold prices repeatedly setting all-time highs (touching \$5,600 per ounce in January 2026) collectively constitute the macroeconomic drivers of demand for tokenized gold. But what truly makes tokenized gold a distinctive asset class is not the macro factors themselves - it is the way they have reshaped the microstructure of the gold market.



Source: [RWA.xyz](https://app.rwa.xyz/) - [Commodities](#)

### Microstructural Revolution: 24/7 Price Discovery

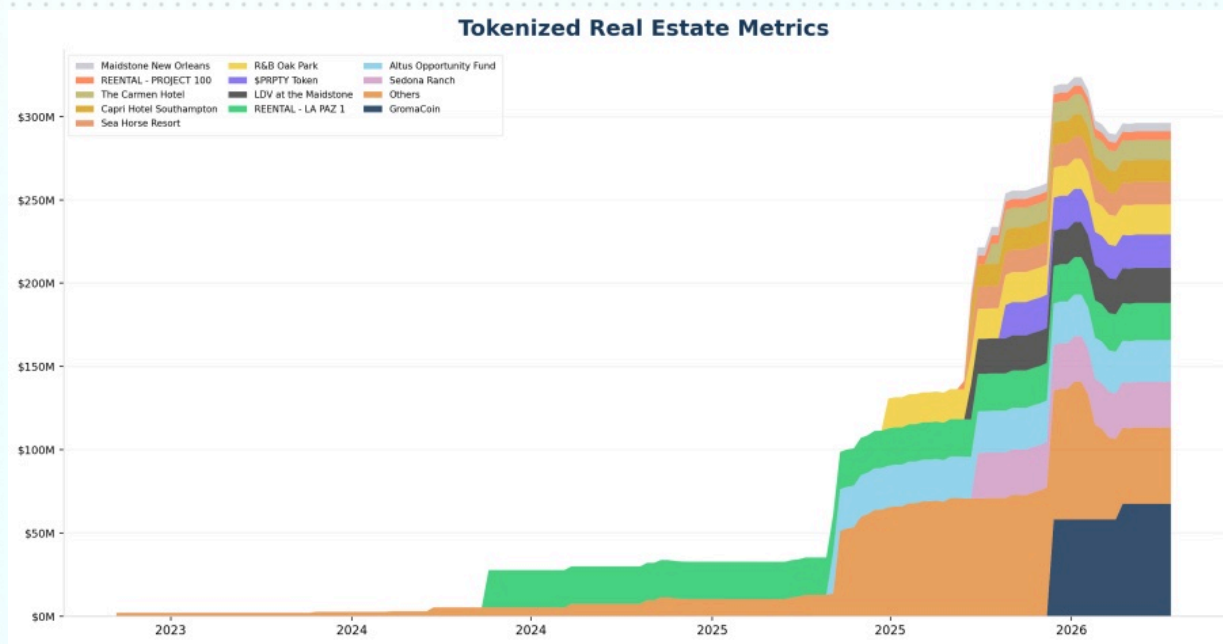
The traditional gold market has a significant structural limitation: the London Metal Exchange (LME) and COMEX gold futures markets close on weekends and holidays, meaning the world's most important price discovery mechanism is offline for at least 48 hours every week. Major events occurring during this period - geopolitical conflicts, central bank policy signals, unexpected economic data - can only be reflected in gold prices when markets reopen on Monday, producing what traders call 'gap openings.'

Tokenized gold is breaking this constraint. Because both XAUT and PAXG can be traded 24/7 on decentralized exchanges such as Uniswap, Curve, and Balancer - with liquidity sufficient to support relatively large trades - tokenized gold is effectively performing the price discovery function of a 'weekend gold market.' When major events occur over the weekend, price movements in PAXG and XAUT have frequently and accurately foreshadowed the direction and magnitude of gap openings in spot gold on Monday morning. This means tokenized gold is evolving from an 'onchain gold derivative' into a 'leading indicator for the gold market' - a capability with direct operational value for professional traders and macro hedge funds.

The true revolutionary significance of tokenized gold is not 'gold onchain,' but rather that 'gold has become a programmable financial asset.' Traditional gold is a static asset - holders can only hold or trade it; it cannot participate in any cash flow-generating activity. Tokenized gold can serve as DeFi protocol collateral for lending (generating interest spreads), provide liquidity (earning trading fees), and participate in structured products (capturing premiums) - all functions that physical gold can never achieve. This functional extensibility may, over the long term, fundamentally alter the valuation logic of gold as an asset class.

## 2.4 Real Estate and Infrastructure: Nascent but Accelerating

Tokenized real estate remains in the earliest stage of the RWA space, with onchain active volume of approximately \$290 million - though momentum is significant. RedSwan has registered over \$5 billion in commercial real estate assets onchain (though most have not yet completed full onchain settlement), and StegX has launched over \$100 million in compliant tokenized real estate projects via the ERC-7518 standard on Hedera. The core value proposition of real estate tokenization is 'fractional ownership' - splitting commercial real estate projects valued at \$10 million or more into token units of \$100 or \$1,000, enabling smaller investors to access asset classes previously available only to institutions and ultra-high-net-worth clients. The current core challenges, however, are not technical but legal: interpretations of 'token ownership equals property ownership' differ enormously across jurisdictions, cross-border transaction enforcement costs remain excessive, and secondary market liquidity is consequently constrained.



Source: [RWA.xyz](https://RWA.xyz) - Real Estate

The most significant near-term breakthrough in tokenized real estate is more likely to come from data centers and renewable energy infrastructure. Three reasons: first, the cash flows from these assets are more stable and predictable, better suited to tokenization's pricing and

valuation models - data center lease contracts are typically 10–15-year investment-grade agreements, and green energy projects usually have long-term PPAs; second, global investment demand for data centers and green energy (driven by AI training and the energy transition) far exceeds the capacity of existing financing channels, and tokenization can open new global capital pools; third, institutional investor appetite for ESG and AI infrastructure allocations is rising sharply, creating robust demand-side pull.

## Chapter 3 The HNW Opportunity: Access, Yield, and Portfolio Construction

Among all potential beneficiaries of RWA, high-net-worth (HNW) clients represent the segment with the clearest demand, the fastest growth, and yet the most under-served by product designers. The global HNW population (investable assets of \$1 million to \$30 million) and UHNW population (above \$30 million) together exceed 22 million individuals, with combined investable assets of approximately \$90 trillion. Even if this group were to allocate just 5% of assets to tokenized RWA products, that would represent \$4.5 trillion in inflows - equivalent to more than 160 times the current total RWA market size. This chapter provides a deep analysis of the distinctive allocation logic of HNW clients and offers targeted product and distribution recommendations.

*Source: Capgemini World Wealth Report 2025*

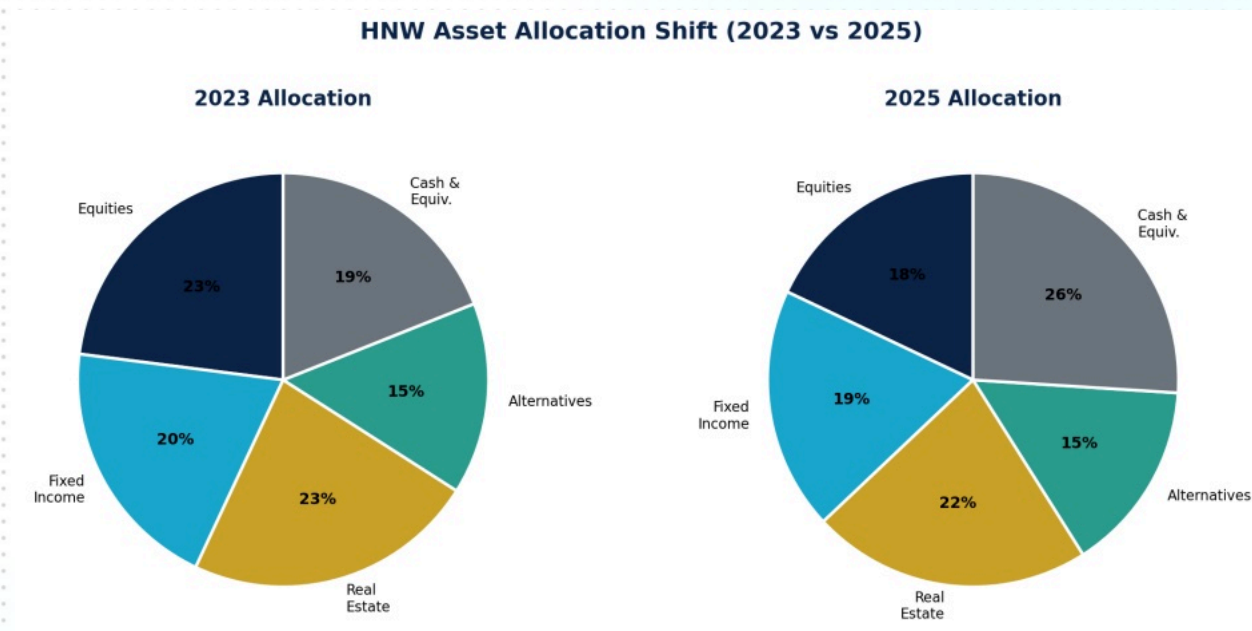
### 3.1 Shifts in HNW Asset Allocation: From Traditional to Digital

Over the past three years, global HNW investor asset allocation has shifted significantly. According to Capgemini's World Wealth Report, HNW asset allocation in 2023 consisted of equities at 23%, fixed income at 20%, real estate at 23%, alternatives at 15%, and cash and equivalents at 19%. By 2025, this structure had adjusted to equities at 18%, fixed income at 19%, real estate at 22%, alternatives at 15%, and cash and equivalents at 26%. The most notable change is the substantial increase in cash and equivalents from 19% to 26%, reflecting investor preference for liquidity and certain income in a high-interest-rate environment.

The rise in cash allocation creates a natural entry point for tokenized RWA products. Tokenized money market funds (such as BlackRock BUIDL and Franklin Templeton BENJI) and Treasury products (such as Ondo OUSG/USDY) offer precisely the option between traditional cash deposits and fixed-income products - maintaining high liquidity while achieving T+0 redemption through onchain settlement, with annual yields of 4–5%, far above savings account rates. As of Q1 2026, BUIDL alone has surpassed \$2.5 billion in AUM, making it the world's largest tokenized money market fund.

Another core attraction of tokenized products for HNW clients is the reduction in access thresholds. Traditional private equity funds typically require minimum investments of \$1 million to \$5 million with lock-up periods of seven to ten years. Tokenized products dramatically lower investment minimums by splitting fund shares into smaller units. Hamilton Lane's tokenized private equity fund has a minimum investment of just \$10,000, while multiple tokenized funds on

the Securitize platform have minimums around \$50,000 - enabling many more HNW clients to access asset classes previously reserved for institutional investors.



Source: Capgemini World Wealth Report 2025

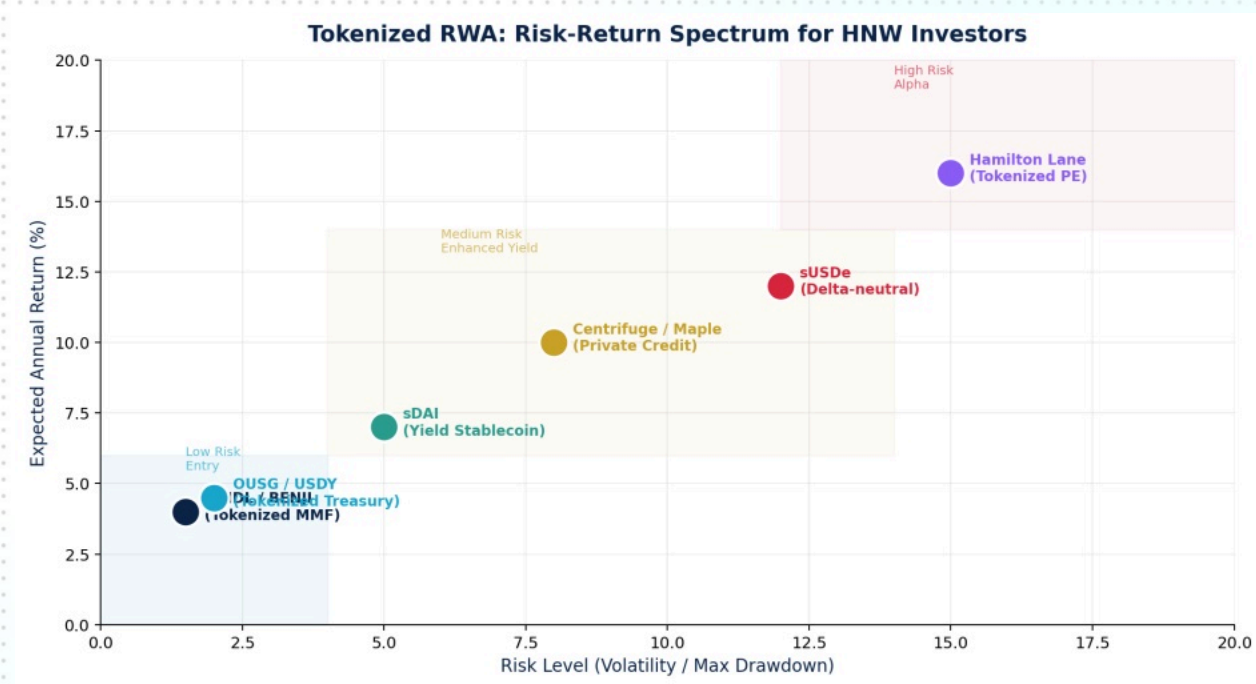
### 3.2 The Risk-Return Spectrum of Tokenized RWA Products

For high-net-worth investors, understanding the risk-return profile of different tokenized RWA products is essential. Ranging from most conservative to most aggressive, the major tokenized RWA products currently available in the market can be classified into the following tiers. At the low-risk end, tokenized money market funds (BUIDL/BENJI) and short-term Treasury products (OUSG/USDY) offer annualized yields of 4–5%, with risk levels comparable to traditional money market funds and primary risks arising from smart contract security and issuer credit. The middle tier includes yield-bearing stablecoins (such as sDAI, yielding approximately 7% annually) and tokenized private credit (such as product pools from Centrifuge and Maple, yielding 8–12% annually), with the latter taking on borrower default risk and liquidity risk. At the high-risk end, delta-neutral strategy products (such as sUSDe, capable of yielding 12%+ annually) and tokenized private equity (such as Hamilton Lane's products, targeting 15%+ returns) offer the highest potential returns but also carry the greatest volatility and liquidity constraints.

It is important to note that the sources of risk differ substantially across products. Treasury-type products have underlying assets (U.S. short-term Treasuries) with extremely low credit risk, with primary risks at the technical level (smart contract vulnerabilities, oracle failures) and operational level (custodian insolvency, redemption delays). Private credit products, by contrast, face core risk from borrower default - Maple Finance experienced multiple borrower defaults during 2022–2023, with some lending pools suffering losses exceeding 50%. Since 2024, Maple has significantly reduced its default rate by introducing overcollateralization and more rigorous credit assessment mechanisms. As of Q1 2026, Maple (rebranded as Syrup) has approximately \$1.2

billion in active loan balances, with weighted average annualized yield of approximately 9.2% and a default rate that has fallen below 0.8% over the past twelve months.

Source: [Maple Finance / Syrup](#)



Source: [RWA.xyz](#) - Based on product disclosures and onchain data estimates

### 3.3 Portfolio Construction: Traditional vs. RWA-Enhanced

For HNW investors, incorporating tokenized RWA into an investment portfolio should not be a simple asset substitution but a structural optimization. The traditional '60/30/10' allocation model (60% equities, 30% bonds, 10% alternatives) has performed reliably over past decades, but faces challenges in the current macro environment: heightened interest rate volatility creates uncertainty in bond returns, geopolitical risk elevates equity volatility, and the liquidity constraints of alternative investments become more pronounced during market stress.

While maintaining a comparable level of risk, some institutional allocators and wealth managers have begun exploring a partial reallocation from traditional fixed income toward tokenized RWA products - for example, adjusting equities to 55%: equities at 55% (down 5% from the traditional model), traditional bonds at 15% (down 15%), tokenized Treasuries at 10% (new), tokenized private credit at 6% (new), tokenized commodities at 4% (new), and alternatives at 10% (unchanged). The core logic of this adjustment is as follows: tokenized Treasuries can deliver yield levels comparable to traditional bonds but with higher liquidity (24/7 redemption); tokenized private credit provides a yield premium (3–5 percentage points above traditional bonds); and tokenized commodities (such as PAXG/XAUT gold tokens) offer inflation hedging and diversification benefits.

## Chapter 4 Regulatory Deep Dive: United States, European Union, and Asia-Pacific

The compliance trajectory of tokenized RWA products is accelerating on a global scale. Between 2024 and 2026, the United States, the European Union, and major Asia-Pacific economies have each introduced regulatory frameworks for digital assets and tokenized securities, marking the industry's formal transition from a 'regulatory gray zone' to the 'compliance mainstream.' However, the regulatory pathways and priorities across jurisdictions differ significantly, and understanding these differences is essential for institutional investors planning cross-border deployment.

### 4.1 United States: The Dual-Track Parallel of the GENIUS Act and CLARITY Act

U.S. crypto asset regulation achieved breakthrough progress in 2025–2026. In July 2025, the President signed the GENIUS Act (Guiding and Establishing National Innovation for U.S. Stablecoins) - the first federal law in U.S. history dedicated specifically to stablecoins. The Act's core provisions include: requiring stablecoin issuers to hold 100% reserves in high-quality liquid assets (including U.S. Treasuries, cash, and central bank deposits); establishing a dual federal-state licensing system, with issuers exceeding \$10 billion in assets required to obtain federal licensing; prohibiting the issuance of algorithmic stablecoins; and requiring monthly disclosure of reserve composition and audit reports. The Act will enter full effect in January 2027, with an 18-month transition period currently underway.

*Source: U.S. Congress - GENIUS Act (S.394)*

Unlike the GENIUS Act's focus on stablecoins, the CLARITY Act - currently still under Congressional review - seeks to address the broader issue of digital asset classification. The Act's core objective is to clarify the jurisdictional boundary between the SEC and CFTC: placing fully decentralized digital assets under CFTC oversight as 'digital commodities,' while retaining tokenized securities with the characteristics of investment contracts under SEC jurisdiction. For the RWA industry, passage of the CLARITY Act would provide urgently needed legal certainty: tokenized Treasuries, tokenized private credit, and tokenized fund shares would clearly fall under existing securities law frameworks, with issuers able to conduct compliant offerings via Reg D (private placement exemption) or Reg A+ (small public offering). The Act is expected to complete its legislative process in the second half of 2026.

### 4.2 European Union: Full Implementation of the MiCA Framework

The EU is at the forefront of global crypto asset regulation. The Markets in Crypto-Assets Regulation (MiCA) entered into full effect in December 2024, establishing the world's first unified regulatory framework covering major categories of crypto assets. MiCA classifies crypto assets into three groups: Asset-Referenced Tokens (ARTs, similar to commodity-pegged stablecoins), Electronic Money Tokens (EMTs, i.e., fiat-pegged stablecoins), and other crypto assets. Of greatest relevance to the RWA industry, MiCA clarifies the licensing regime for Crypto-Asset

Service Providers (CASPs) - any entity conducting crypto asset trading, custody, advisory, or portfolio management services across the EU's 27 member states must obtain a CASP license.

*Source: ESMA - MiCA Regulatory Framework*

As of Q1 2026, 53 firms have obtained EU CASP licenses or are in the process of transitional approval. The MiCA transition deadline is July 2026, by which time all crypto asset service providers operating in the EU must have completed their license applications. It is worth noting that MiCA's application to tokenized securities involves some ambiguity - if a tokenized product is classified as a 'financial instrument' (such as tokenized stocks or bonds), the MiFID II framework applies rather than MiCA. This dual-track system has created some compliance uncertainty in practice, and ESMA is developing additional technical standards to clarify the boundary.

### 4.3 Asia-Pacific: The Differentiated Paths of Hong Kong, Singapore, and Japan

The regulatory landscape in Asia-Pacific exhibits notably differentiated characteristics. Hong Kong has adopted the most proactive regulatory posture - the Stablecoin Ordinance enacted in May 2025 established the Hong Kong Monetary Authority (HKMA) as the core regulator for stablecoin issuance, requiring issuers to establish entities in Hong Kong and hold equivalent reserve assets. Simultaneously, the Securities and Futures Commission (SFC) approved operating licenses for multiple virtual asset trading platforms in 2024–2025, and in 2025 issued guidance on the distribution of virtual asset funds to retail investors. As of Q1 2026, Hong Kong has 12 digital asset institutions authorized by the SFC or HKMA.

*Source: HKMA - Stablecoin Regulation*

The Monetary Authority of Singapore (MAS) has adopted a relatively cautious but innovation-friendly approach. MAS updated its Payment Services Act framework in 2024, incorporating tokenized securities and tokenized fund shares into the capital markets services licensing regime. Singapore's distinguishing feature is its sandbox mechanism - Project Guardian partners with JPMorgan, DBS, and other institutions to test trading and settlement of tokenized bonds, tokenized foreign exchange, and tokenized funds in controlled environments. As of Q1 2026, Singapore has 24 licensed digital payment token service providers.

*Source: SFC - Virtual Asset Regulation*

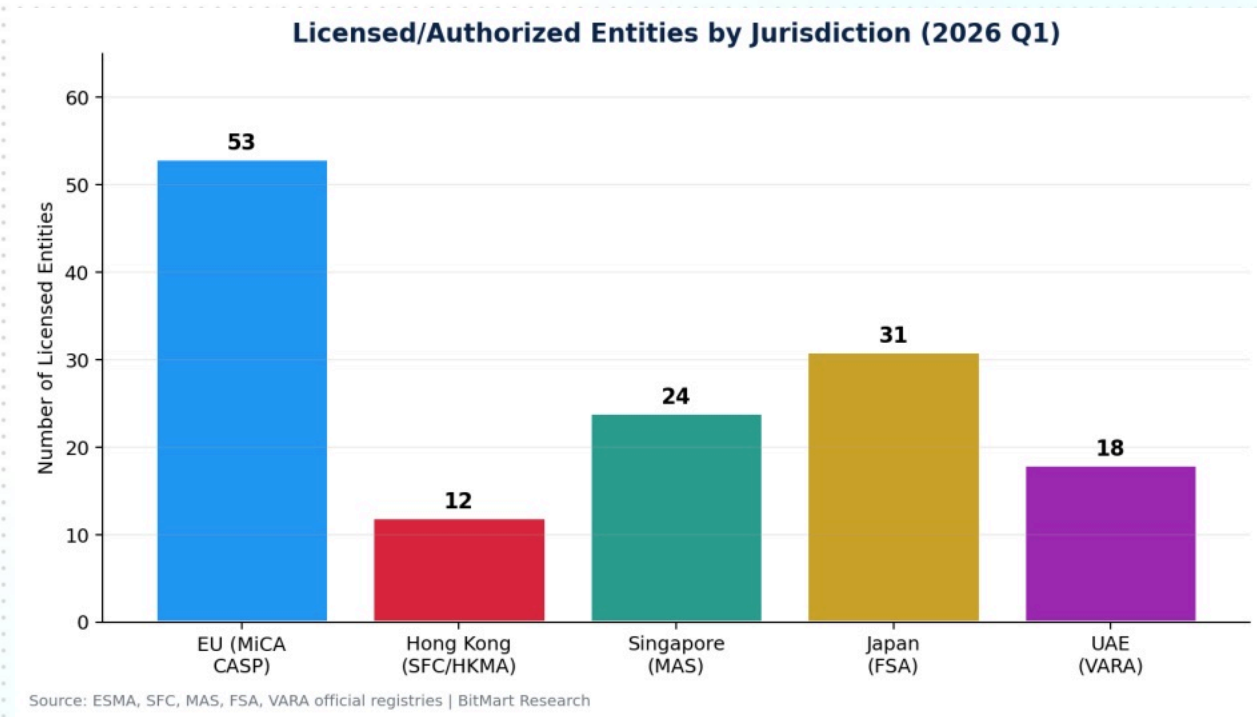
Japan's Financial Services Agency (FSA) has advanced a series of far-reaching reforms in 2025–2026. The 2026 tax reform reduced the maximum tax rate on crypto assets from 55% to 20% (on par with stock capital gains tax) - a change widely viewed as a key catalyst for attracting institutional investors into the digital asset space. In addition, the FSA is developing detailed regulatory rules for 'security token offerings' (STOs), incorporating tokenized securities into the framework of the Financial Instruments and Exchange Act. As of Q1 2026, Japan has 31 registered crypto asset exchanges.

*Source: Japan FSA*

Dubai's Virtual Assets Regulatory Authority (VARA) is also rapidly building its regulatory framework. VARA issued 18 virtual asset service provider licenses in 2024–2025, with

regulatory features including tiered licensing for different business types (trading, brokerage, custody, advisory, lending, transfer, management and investment), as well as dedicated compliance guidance for tokenized real estate and tokenized commodities.

Source: VARA - Dubai Virtual Assets Regulatory Authority



Source: ESMA, SFC, MAS, FSA, VARA official registries

#### 4.4 Regulatory Trends and Institutional Compliance Strategy

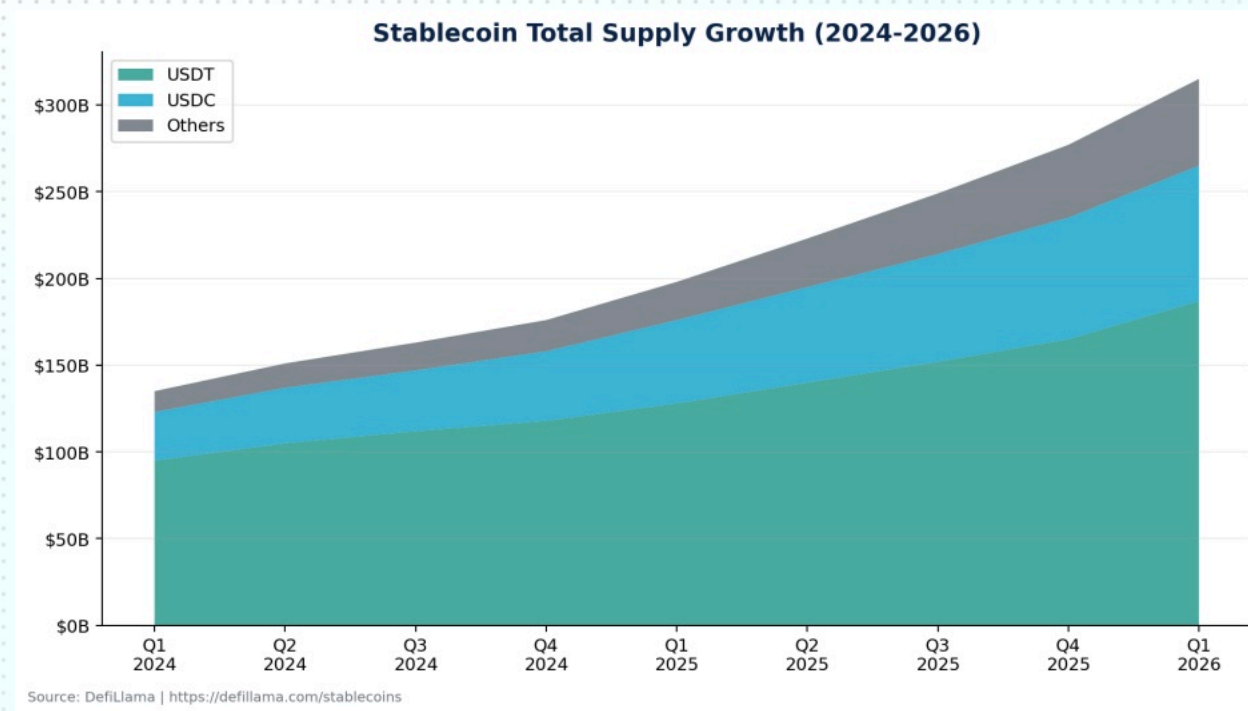
Three major trends emerge from a synthesis of global regulatory developments. First, stablecoin regulation is moving from a 'gray zone' into an 'era of strong oversight' - virtually every major jurisdiction has issued dedicated stablecoin regulations between 2024 and 2026, with converging core requirements around 100% reserves, regular audits, and licensed access. Second, regulation of tokenized securities is converging toward existing securities law frameworks, with regulators generally treating tokenized securities as 'old products in a new form' rather than new phenomena requiring entirely new rules. Third, cross-border regulatory coordination remains in early stages but is accelerating - IOSCO, the FSB, and the BIS have published multiple guidance documents on cross-border regulation of tokenized assets.

## Chapter 5 Infrastructure Readiness: Custody, Liquidity, and Settlement

Large-scale adoption of tokenized RWA products requires not only regulatory green lights and investor demand, but also a mature, secure, and efficient infrastructure to support the full lifecycle from issuance through trading to settlement. Between 2024 and 2026, the maturity of different infrastructure layers within the RWA ecosystem has shown notable unevenness - the stablecoin settlement layer is quite mature, institutional-grade custody solutions are evolving rapidly, but cross-chain interoperability and secondary market liquidity remain the primary bottlenecks. This chapter evaluates the readiness of each infrastructure layer in turn, identifying key gaps and future directions.

### 5.1 The Settlement Layer: The Institutionalization of Stablecoins

Stablecoins represent the most mature layer of RWA infrastructure. As of Q1 2026, total global stablecoin supply has surpassed \$315 billion - growth of over 130% from approximately \$135 billion at the start of 2024. USDT maintains market leadership with \$187 billion in supply (approximately 59%), USDC supply stands at \$78 billion (approximately 25%), with the remaining share distributed among PYUSD, DAI, FDUSD, and others.



Source: [DefiLlama - Stablecoins](#)

The passage of the GENIUS Act has further accelerated the institutionalization of stablecoins. The Act requires issuers to hold U.S. Treasuries or cash equivalents in their reserve assets - effectively transforming stablecoin issuers into significant holders of U.S. Treasuries. At current scale, stablecoin reserves hold approximately \$120 billion in U.S. Treasuries, already exceeding

the holdings of many sovereign nations. This 'stablecoin-Treasury' symbiotic relationship creates a positive feedback loop for tokenized RWA: greater stablecoin demand leads to more Treasury purchases, which leads to lower Treasury yield volatility, which leads to more stable RWA product returns, which leads to greater institutional adoption.

## 5.2 The Custody Layer: From Crypto-Native to Traditional Financial Institutions

Institutional-grade digital asset custody is one of the fastest-evolving areas in RWA infrastructure. Custody solutions have expanded from early purely crypto-native offerings (such as Fireblocks and BitGo) to digital asset custody services from traditional financial giants. BNY Mellon formally launched its digital asset custody service for institutional clients in 2024, becoming the first among the world's largest custodian banks to offer crypto asset custody. State Street, Citibank, and Northern Trust have also announced digital asset custody plans. As of Q1 2026, the total assets under institutional-grade digital asset custody globally are estimated to exceed \$400 billion.

*Source: BNY Mellon - Digital Assets*

For RWA products, the complexity of custody lies in the need to manage both onchain tokens and off-chain underlying assets simultaneously. Taking tokenized Treasuries as an example, a custodian must: (1) securely hold onchain the ERC-20 tokens representing fund shares; (2) hold the actual U.S. Treasuries off-chain via traditional custody accounts; and (3) ensure consistency between onchain tokens and off-chain assets (i.e., that the 'peg' does not break). Crypto-native custodians such as Fireblocks and Anchorage Digital have established partnerships with traditional custodian banks to provide 'dual-layer custody' solutions - the onchain portion managed by the crypto custodian, the off-chain portion managed by the traditional custodian bank, with the two maintained in sync through APIs and audit mechanisms.

## 5.3 The Compliance Layer: Onchain KYC/AML and Transaction Monitoring

Compliance infrastructure is the critical bridge connecting traditional finance and the onchain world. Current onchain compliance tools have formed a relatively complete technology stack: Chainalysis and TRM Labs provide transaction monitoring and risk scoring services covering address behavior analysis on major public blockchains; Jumio and Synaps provide onchain KYC solutions supporting onchain credentialing of identity verification (such as through verifiable credentials/VCs); and Securitize's compliance engine provides onchain enforcement of investor suitability checks and transfer restrictions.

However, the overall readiness assessment for the compliance layer is approximately 60%. Key gaps include: cross-chain identity consistency (users must repeat KYC on different chains), the balance between privacy protection and compliance requirements (how to protect user privacy while satisfying regulatory disclosure obligations), and mutual recognition of compliance standards across jurisdictions (whether a user who has completed KYC in the EU can directly participate in a U.S. tokenized product). Zero-knowledge proof technology and soulbound tokens (SBTs) are providing potential solutions to these challenges, but large-scale application still requires time.

## 5.4 The Execution Layer and Interoperability: The Final Bottleneck

The execution layer (OTC trading and exchange trading) and cross-chain interoperability are the least mature elements of current RWA infrastructure. At the execution layer, secondary market liquidity for tokenized RWA remains severely insufficient. Taking tokenized private credit as an example, most products have virtually no secondary market trading after issuance - investors can only wait for maturity or exit through the issuer's redemption window. Even for the most liquid tokenized Treasury products such as BUIDL, daily onchain trading volume is only in the millions of dollars - negligible compared to traditional Treasury markets. The root of this problem is that the holder base for tokenized RWA remains small, with most being buy-and-hold investors, lacking active market makers and arbitrageurs to provide liquidity.

Cross-chain interoperability is another critical bottleneck. Current tokenized RWA products are scattered across multiple chains - BUIDL is primarily deployed on Ethereum, some RWA products are issued on Stellar, Avalanche, and Solana, and private credit products operate on Centrifuge (based on Substrate). This fragmentation leads to liquidity segmentation and a fractured user experience. Chainlink's Cross-Chain Interoperability Protocol (CCIP) and Circle's CCTP are attempting to address this problem. CCIP supports cross-chain token transfers and messaging and has been used by SWIFT in its tokenized asset settlement pilot; CCTP enables native transfers of USDC between major chains. However, for the cross-chain transfer of tokenized securities, the problem of transmitting compliance credentials across chains must also be solved - specifically, how to ensure that an investor's KYC and accredited investor status are recognized across different chains.

*Source: Chainlink - Cross-Chain Interoperability Protocol (CCIP)*

## 5.5 The OP Stack and Institutional RWA Infrastructure *Contributed by Optimism*

The cohort moving onto public chains in mid-2026 is structurally new. Risk committees that had never approved a public blockchain deployment are saying yes for the first time, deals are larger, counterparties are more established, and the time to go from evaluation to signing is decreasing rapidly.

### **Asset Class Momentum: Three Categories Attracting Institutional Capital**

From our vantage point hosting institutional issuances and engaging directly with the most active players in the market, three asset classes carry genuine momentum:

- Tokenized money market funds and treasuries. BlackRock's BUIDL was deployed to OP Mainnet in 2024. It is still the largest onchain Tokenized Money Market Fund (TMMF). With Grove recently offering instant redemptions with a \$1B facility, tokenized funds are now becoming truly "liquid."
- Asset-backed commodities. Mitsui & Co. Digital Commodities went live on OP Mainnet in April with ZipangCoin, Japan's first commodity-backed cryptoasset, backed by gold, silver, and platinum from a \$94 billion conglomerate with 150 years of operating history.
- Institutional-scale consumer financial products. Possibly the most important leading indicator for cross-segment demand. EtherFi migrated 300,000 accounts and 70,000

active debit cards to OP Mainnet in April. Their Liquid Vaults powering earn for users are continuing to expand into RWA yield products.

## **The Integration-Time Bottleneck**

Tokenization itself is fast. Bringing an RWA onchain can happen in days. The bottleneck is the infrastructure stack that has to function around the tokenized asset.

An institutional-grade RWA depends on nine key components to function: asset manager, fund administrator, transfer agent, vault infrastructure, oracle provider, compliance layer, onchain security, DeFi integrations, and liquidity buffer. Each integration across the stack can be bespoke. Token standards for RWAs are still somewhat fractured, particularly around wrappers that enable compatibility with the broader DeFi ecosystem.

OP Enterprise addresses this by providing issuers with a curated, contract-ready ecosystem with pre-negotiated commercial terms and pre-validated integration paths, rather than requiring independent negotiation with each layer of the stack. Bitpanda is using OP Enterprise to ship Vision Chain to mainnet in the second half of 2026.

## **Defining Institutional-Grade: Seven Filters Issuers Apply**

Seven filters a serious issuer applies before shipping:

- Time to L1. Settlement time is an opportunity-cost when capital is idle.
- Gas denomination. Non-USD institutions feel real friction outside their operating currency.
- Operational accountability. Issuers want to know who is on the phone at 2am when something breaks.
- Privacy without losing public-chain composability. Institutional confidentiality requirements are now reconcilable with public-chain deployment through ZK proofs and trusted execution environments.
- Counterparty quality. No institution deploys onto a chain without first vetting who else is already on it. Institutional-grade infrastructure requires institutional-grade neighbors.
- Disaster recovery and exit certainty. Force-inclusion mechanisms, escape hatches, and proven L1 withdrawal paths are underwriting requirements.
- Regulatory legibility. Compliance committees won't approve a deployment they can't legally defend.

Every filter above reduces to one underlying requirement: an issuer must be able to deploy capital, defend it to their compliance committee, generate fee/AUM revenue, redeem cleanly, and report accurately - without assuming operational, regulatory, or counterparty risks that wouldn't be acceptable in a TradFi context.

## **Redemption Facilities and Institutional RWA Liquidity**

Tokenized RWA products have had a liquidity gap that often deters participation in size. A new category of infrastructure providers is creating capabilities that help solve these problems. Grove is possibly the most established example, with Fission and Agra emerging as new players. In May, BlackRock's BUIDL and Janus Henderson's tokenized funds got instant redemptions through a \$1B Grove facility.

### **A Proprietary Observation: TVL Compounding on OP Mainnet**

OP Mainnet's application TVL doubled to \$384M in the seven days following EtherFi's and Mitsui's launches in April. Application fees ran roughly 4x their pre-launch average with stablecoin supply hitting \$585M, the highest in over a year.

The signals across mid-2026 point in the same direction. Institutional issuers are deploying onto public chains at unprecedented scale. The asset classes attracting capital are expanding from treasuries to commodities, structured credit, and more. Redemption infrastructure is starting to close the liquidity gap. The institutional RWA market is no longer waiting for the infrastructure to catch up. The infrastructure is here.

*Source: Optimism, internal data, April-May 2026*

## **5.6 The Oracle and Data Layer: Pricing, Settlement, and Risk Infrastructure**

### **The Infrastructure Gap Beneath the Tokenization Boom**

The growth is clear: onchain RWA TVL jumped from \$6 billion in early 2025 to over \$24.6 billion by April 2026. This fivefold rise came from clearer regulations and more institutional money. Still, only about 10% of that capital is used as collateral in DeFi lending. The other 90% just sits in wallets, earning yield but not doing much else.

From RedStone's view across the RWA data and settlement stack, the main barriers holding back that 90% are not regulatory. The frameworks are already in place. The real issues are architectural. DeFi's protocols, pricing, and risk models were built for assets very different from Treasury bills, trade receivables, or private credit. To close the deployment gap, we need to address this mismatch head-on.

### **The Mismatch That Most People Are Not Talking About**

DeFi lending markets were built for liquid collateral that can be priced and sold in seconds. RWAs bring in assets with set terms. For example, a 90-day Treasury, a trade finance receivable, or a private credit facility all have maturity dates that do not fit a 24-hour redemption window. Still, these assets can end up in the same lending pool, priced by the same oracle, without any real adjustment for their differences.

This mismatch in timing is the biggest structural risk in today's RWA and DeFi integration, and most protocols have not solved it. The fact that 90% of tokenized RWAs are idle is not just about composability. It also makes sense, given that there is no infrastructure built to handle the difference between a crypto asset you can settle instantly and a bond that settles in 60 days.

Pricing is another part of the problem. Unlike crypto assets, RWA prices do not update continuously. Many tokenized assets have periods, sometimes hours or longer, when onchain

price feeds are outdated, estimated, or do not show the real value. This can lead to silent undercollateralization: a lending position looks safe onchain but is actually at risk. Liquidation engines that use crypto-native rules are vulnerable to this whenever RWA collateral is used. RedStone Settle was built to solve this, offering settlement tools that match asset maturity with onchain needs and help protocols handle a 90-day asset in a 24-hour system.

*Source: RedStone - RedStone Settle: Bringing Instant Settlement to Real-World Assets Liquidations*

### **Risk Ratings Need to Catch Up Too**

As more money enters the space, the sector is splitting into many parts. Senior and junior tranches, variable yields, legal wrappers from different places, and mixed-collateral vaults are now common. In this setting, just rating the underlying asset is not enough. The risk of the vault or lending market where a user deposits funds can be very different from the risk of the collateral itself.

We need independent, onchain risk assessments that work at three levels: the asset, the market or protocol it is in, and the vault strategy on top. This multi-layer framework is already being applied across more than \$10B of TVL across protocols like Morpho and Spark. Without clear information at all three levels, mispricing can build up quietly and become a big problem when there is a liquidity event. The market needs risk scores that are easy to audit, repeat, and access onchain.

### **The Asset Classes Coming Next Will Demand More**

The tokenized Treasury market has shown it works. What comes next will be more complicated. Trade finance, payment receivables, and factoring instruments are starting to show up onchain in larger amounts. Each has its own cash flow timing, counterparty risks, and liquidity windows that are very different from a standard T-Bill.

A price feed made for Treasuries cannot price a trade receivable. A liquidation system set up for money market funds cannot handle a 45-day invoice. The oracle and data layers need to evolve along with the asset classes. The best time to get this architecture right is now, before volumes grow and fixing things later becomes costly.

### **The Standards Problem Nobody Has Solved**

At the root of all these issues is fragmentation, which makes every other challenge harder. There is no main framework for how RWAs are shown onchain. Metadata, transfer rules, yield distribution, and redemption logic all differ between issuers, chains, and jurisdictions. Any protocol that wants to accept RWA collateral has to deal with this inconsistency, and every cross-chain deployment adds more complexity.

The takeaway is simple: the sector needs to come together around interoperable standards. It does not have to be just one standard, but a group of compatible ones. This is one of the biggest infrastructure questions left to solve. The institutions that help set these standards in the next year or so are likely to gain a real advantage in the market they help create.

The deployment gap is real, but it can be closed. To do that, we need to treat infrastructure as the main challenge, not just a side note to regulation.

*Source: RedStone - Tokenization & RWA Report 2026*

## Key Institutional Takeaways (2026–2028)

Based on our analysis of market structure evolution, asset class deployment data, and operational barriers across five chapters, we identify the following strategic conclusions for institutional participants:

**1. The Deployment Gap Is an Infrastructure Problem, Not a Regulatory One** With the GENIUS Act, CLARITY Act, and MiCA now in place, the primary constraint on institutional RWA deployment has shifted from regulatory uncertainty to middle-layer infrastructure - custody standards, cross-chain liquidity, legal enforceability, and reporting integration. Institutions that solve these operational barriers first will define the competitive landscape. Onchain data from Dune confirms this: of \$27 billion in tokenized RWAs, only 10% is actively composable - the deployment gap is measurable, not theoretical.

**2. Tokenized Treasuries Are the Onchain Risk-Free Rate** At \$13+ billion and growing, tokenized U.S. Treasuries have become the foundational credit anchor of the onchain capital market. Their role extends beyond yield generation - they serve as pricing benchmarks, collateral assets, and settlement instruments across the RWA ecosystem. BlackRock's BUIDL deployment on OP Mainnet and its integration into DeFi redemption facilities illustrate this structural role in practice.

**3. Private Credit Is the Yield Engine, but Transparency Is a Double-Edged Sword** Tokenized private credit at 8–12% annualized yield offers compelling risk-adjusted returns, but onchain transparency erodes the information asymmetry that has historically underpinned private credit alpha. Second-generation products with more complex risk structures are expected to emerge in H2 2026.

**4. HNW Clients Represent the Largest Untapped Opportunity** With \$90 trillion in global HNW/UHNW investable assets, even a 5% allocation to tokenized RWA would represent 160x the current market size. Declining access thresholds and T+0 redemption mechanics are removing structural barriers - but product design must address HNW-specific priorities around narrative, liquidity, and tax certainty rather than replicating institutional formats.

**5. Custody and Legal Enforceability Remain the Binding Constraints** In most tokenization structures, tokens represent claims against an SPE or issuer rather than direct legal title to the underlying asset. Until custodian infrastructure matures to support full asset lifecycle management and creditor rights align with tokenized claim structures across major jurisdictions, institutional scale deployment remains structurally constrained.

**6. Asia-Pacific Is Emerging as a Parallel Regulatory Center** Hong Kong, Singapore, Japan, and the UAE are no longer secondary markets following U.S. and EU frameworks - each has established distinct regulatory infrastructure with meaningful institutional deal flow. Cross-border multi-jurisdictional deployment strategies must now treat Asia-Pacific as a primary jurisdiction, not an afterthought.

# Methodology & Data Notes

## Data Currency and Retrieval Window

Unless otherwise noted, all market data, TVL figures, AUM estimates, and regulatory statistics cited in this report reflect publicly available information as of April 2026. Data points sourced from onchain analytics platforms (including RWA.xyz, DeFiLlama, and Dune Analytics) are subject to continuous revision as onchain state changes. Readers should verify current figures directly with the relevant data providers.

## TVL and Market Size Definitions

Total Value Locked (TVL) and tokenized asset market size figures may vary across providers due to differences in asset scope, chain coverage, and inclusion criteria. Unless explicitly stated, TVL figures in this report exclude fiat-backed stablecoins (USDT, USDC, etc.). Figures citing Dune Analytics reflect Dune's proprietary methodology, which may include a broader set of tokenized asset categories than other providers. Where material discrepancies exist between sources, they are noted inline.

## Onchain Data Sources

Onchain data referenced in this report is drawn from publicly accessible blockchain analytics platforms. Figures represent best available estimates at the time of retrieval and should not be construed as audited or certified financial data.

## Forward-Looking Statements

Certain statements in this report, including projections regarding market growth, institutional adoption timelines, and product development trajectories, constitute forward-looking statements. These reflect current expectations and are subject to risks, uncertainties, and changes in market or regulatory conditions. Actual outcomes may differ materially.

## Regulatory Timelines

References to legislative and regulatory developments - including the GENIUS Act, CLARITY Act, MiCA, and Asia-Pacific frameworks - reflect the status of those frameworks as of the report date. Regulatory timelines, implementation schedules, and enforcement interpretations are subject to change. Nothing in this report constitutes legal or compliance advice.

## Co-Author Contributions

Sections contributed by Dune, RedStone, and Optimism represent the independent views and operational observations of those organizations. BitMart has not independently verified all claims made in contributed sections. Co-author perspectives do not constitute the official position of BitMart.

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