

Digital Assets & Tokenisation

Exploring the transformation of traditional finance through blockchain technology, regulatory frameworks, and institutional adoption of digital assets.

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Aareal
YOUR COMPETITIVE ADVANTAGE.

1. What is Tokenisation ?



Tokenisation is the **digital representation of an asset, liability, or ownership right on a programmable ledger.**

The underlying asset does not necessarily change, but the record of ownership and transfer mechanism changes.

- ✓ Programmable & transferable
- ✓ 24/7 settlement capability
- ✓ Fractional ownership enabled



↔ What Changes

Ownership Record

Digital ledger vs. paper

Transfer Mechanism

Blockchain vs. traditional

Settlement Time

Instant vs. T+2

Accessibility

24/7 vs. business hours

🔒 What Doesn't Change

Asset Value

Underlying value remains

Legal Rights

Ownership claims unchanged

Cash Flows

Dividends remain same

Risk Profile

Credit risk unchanged

Application Examples



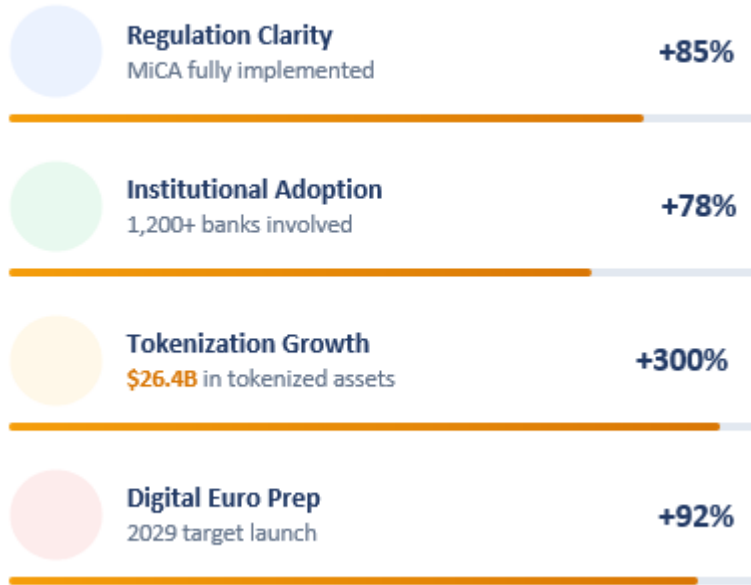
Tokenization enables fractional ownership and 24/7 trading

🕒 Settlement time reduced from T+2 to T+0

📈 Market adoption: +45% YoY

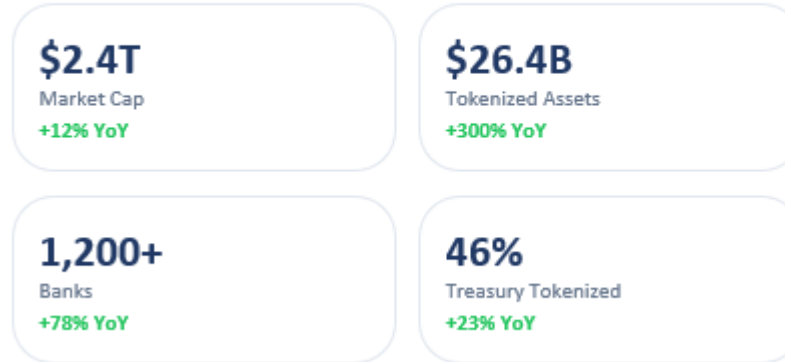
2. Market Context

Key Market Drivers



As of April 2026

Market Statistics



Regulatory Timeline



3. What are Digital Assets?

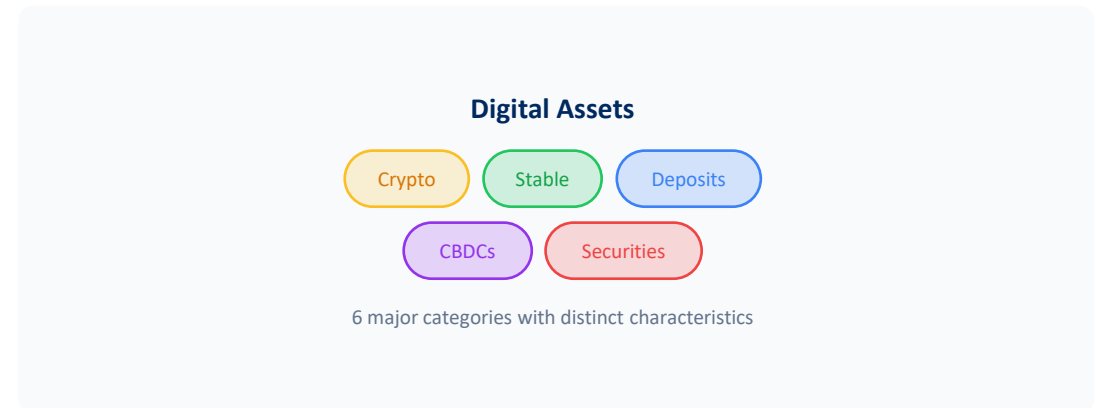
A **digital asset** is a financial or economic claim represented electronically, often on a shared ledger. It encompasses native digital assets, tokenized assets, tokenized traditional assets, and digital forms of money.

Key characteristics: programmable, transferable, divisible, and cryptographically secured

Digital Asset Taxonomy

- Cryptocurrencies**
Native digital assets (BTC, ETH). No issuer, no claim on underlying asset.
- Stablecoins**
Tokens pegged to fiat currency. Lower volatility, backed by reserves.
- Tokenised Deposits**
Commercial bank deposits on DLT. Credit risk of bank.
- CBDCs**
Digital sovereign money. Direct claim on central bank.
- Tokenised Securities**
Traditional instruments (shares, bonds) on blockchain.
- Utility Tokens**
Access to services, networks, or applications.

Classification Hierarchy



\$26.4B

Tokenized Assets
+300% YoY

1,200+







Banks Active
+78% YoY

4. Digital Asset Taxonomy

Comprehensive classification with regulatory framework comparison

Asset Categories & Regulatory Classification

● Active ● Pending ● Proposed

Category	Economic Function & Risk Profile	Primary EU Regulatory Regime	Key Characteristics	Status
 Cryptocurrencies	Native digital assets (BTC, ETH) High Risk Volatility: Very High	MiCA (Reg. EU 2023/1114) CASP ESMA	<ul style="list-style-type: none"> No issuer No claim on asset Speculative 	● Active
 Stablecoins	Pegged to fiat currency Medium Risk Volatility: Low	MiCA Titles III & IV EMT ART	<ul style="list-style-type: none"> Backed by reserves Price stability Payment use 	● Active
 Tokenised Deposits	Commercial bank deposits on DLT Low Risk Credit risk: Bank	EU Banking Law (CRR/CRD) DGSD Banking	<ul style="list-style-type: none"> Bank liability DLT integration Programmable 	● Active
 CBDCs	Digital sovereign money Low Risk Credit: Central Bank	Digital Euro Regulation ECB Eurosystem	<ul style="list-style-type: none"> Direct CB claim Monetary authority Lowest risk 	● Pending
 Tokenised Securities	Traditional instruments on DLT Medium Risk Regulated securities	MiFID II / MiFIR CSDR MAR	<ul style="list-style-type: none"> Ownership rights Cash flows Legal claims 	● Active
 Utility Tokens	Access to services/networks Medium Risk Platform adoption	MiCA (non-ART/EMT) Whitepaper	<ul style="list-style-type: none"> Network access Service usage Not investment 	● Active

5. Regulatory Landscape - MiCA 2026

MiCA Overview
Markets in Crypto-Assets Regulation

MiCA entered into force in June 2023, with full implementation by implementation by **July 1, 2026**. It provides a harmonized regulatory regulatory framework for crypto-assets across the EU.

CASP ESMA EBA NCA

Authorization & Supervision
CASP licensing

- Crypto-asset service providers must obtain authorization
- Supervision by NCAs/ESMA
- AML/CFT compliance requirements

CASP NCA

Stablecoin Requirements
EMT/ART rules

- EMTs: Must be issued by credit institutions
- ARTs: Enhanced requirements for significant tokens
- Reserve backing requirements

EMT ART

Implementation Timeline



Market Integrity Rules
Trading & settlement

- Market abuse prevention
- Insider trading prohibitions
- Transparent pricing requirements

MAR MiFID II

Consumer Protection
Investor safeguards

- Disclosure requirements
- Redemption rights
- Complaints handling procedures

Consumer Protection

Canada's Regulatory Framework

- Stablecoin Framework (2027)
- Bank of Canada supervision
- 1:1 reserve requirements
- CIRO Custody Framework (2026)
- Provincial securities regulation
- Registration requirements

Global Regulatory Comparison EU structured approach vs UK sandbox vs US fragmented vs Canada emerging framework

6. Institutional Use Cases

1,200+ institutions active

Active Deployments

Tokenised Money Market Funds Active
Real-time settlement

- ✓ Instant NAV updates
- ✓ 24/7 liquidity access
- ✓ Reduced settlement risk

+45% efficiency T+0 settlement

Tokenised Bonds Active
Programmable coupons

- ✓ Automated coupon payments
- ✓ Fractional ownership
- ✓ Secondary trading

+60% liquidity 24/7 trading

Collateral Mobility Active
24/7 liquidity

- ✓ Intraday rebalancing
- ✓ Cross-margining
- ✓ Reduced collateral costs

+35% efficiency Real-time

Repo & Securities Financing Active
Atomic settlement

- ✓ Automated repo
- ✓ Securities lending
- ✓ Reduced counterparty risk

+50% speed T+0

Private Markets Active
Fractional ownership

- ✓ Private equity access
- ✓ Fund administration
- ✓ Lower minimums

+70% access Democratized

Cross-Border Payments Active
Instant settlement

- ✓ Instant transfers
- ✓ Reduced fees
- ✓ 24/7 availability

+80% speed Global

7. Why Bankers & Regulators care ?

For Bankers

New Products & Revenue Pools

- Tokenised deposits, stablecoin issuance, custody, wallet services
- Tokenised securities, funds, and collateral services

Efficiency in Issuance & Post-Trade

- Faster issuance, atomic settlement, reduced reconciliation
- Potential reduction in intermediaries and back-office costs

Competition from Digital-Native Infrastructures

- DLT trading venues, settlement layers, and digital wallets
- Pressure on traditional market infrastructures and banks' role

Treasury, Liquidity & Collateral

- Intraday liquidity management with 24/7 continuous settlement
- Tokenised collateral mobility and automated rehypothecation

Divergent priorities and shared interests in digital asset tokenisation

For Regulator

Consumer & Investor Protection

- Disclosure, redemption rights, complaints handling
- Prevention of mis-selling and misleading "stable" claims

Prudential Treatment

- Capital, liquidity, and leverage treatment of digital assets
- Exposure limits and reserve requirements (e.g. EMTs, ARTs)

Operational Resilience

- ICT risk, cyber resilience, outsourcing to DLT providers
- Alignment with DORA and incident reporting frameworks

AML/CFT & Sanctions Enforcement

- Traceability, travel rule compliance on decentralized networks
- Wallet controls, screening, and enforcement effectiveness

Systemic Risk & Contagion

- Stablecoin runs, interconnectedness with traditional finance (TradFi)
- Concentration risks in infrastructures and service providers

Legal Finality & Governance


- Settlement finality on distributed ledgers
- Liability, blockchain fork governance, and accountability frameworks

8. What are the Key Benefits ?

Transforming traditional finance through tokenisation

Faster Settlement
T+0 capability vs T+2 traditional


95% reduction



✓ Instant settlement

Transparency & Auditability
Immutable records on blockchain


100% traceable



✓ Full audit trail

Programmability
Smart contracts automation

85% efficiency



✓ Automated execution

Fractional Ownership
Lower barriers to entry

\$1 minimum



✓ Democratized access

24/7 Operations
Continuous trading capability


24/7 available



✓ Global access

Reduced Reconciliation
Single source of truth

90% savings



✓ Cost reduction

Benefits depend on implementation, regulatory compliance, and market conditions. Results may vary based on specific use cases and technology adoption.

9. What are the Key Challenges?

Legal Uncertainty High

Ownership finality issues, regulatory ambiguity, cross-border enforcement challenges

Finality risk Jurisdiction

Platform Fragmentation Medium

Interoperability issues, multiple standards, isolated networks

Interoperability Networks

Operational & Cyber Risk High

Security vulnerabilities, hacking threats, infrastructure failures

Vulnerabilities Infrastructure

Liquidity Fragmentation Medium

Market depth concerns, price discovery issues, spread widening

Depth Spread

AML/KYC Compliance Medium

Regulatory challenges, identity verification, sanctions screening

Identity Screening

Smart Contract Risk High

Code vulnerabilities, bugs, exploitation risks

Bugs Exploits

Custody & Key Management High

Security concerns, key loss risk, custody solutions

Security Keys

Privacy Tensions Medium

Data protection challenges, GDPR compliance, privacy vs transparency








Privacy Compliance

10. What Success it requires ?

Success requires coordinated effort across all pillars

Stakeholder alignment essential

Critical Success Factors

 Legal Clarity Regulatory certainty ● Active	 Interoperable Standards Standards Cross-platform compatibility compatibility ● Active	 Digital Identity KYC/AML compliance ● Active
 Robust Custody Secure key management ● Active	 Market Infrastructure TradFi connection ● Active	 Common Standards Messaging/settlement ● Pending
 Governance & Auditability Transparency, accountability, audit trails ● Active		

Implementation Requirements

- **Legal Framework**
Clear regulatory guidelines and compliance requirements for all participants
- **Technical Infrastructure**
Robust blockchain infrastructure with high availability and security
- **Interoperability**
Seamless integration with existing financial systems
- **Risk Management**
Comprehensive risk assessment and mitigation strategies

 Implementation Status 85% Complete



11. Takeaways



Digital Assets Transforming Finance
Tokenisation is reshaping traditional finance, enabling new efficiencies and business models

MiCA Provides Regulatory Clarity
EU framework offers legal certainty for crypto-assets and service providers

Institutional Adoption Accelerating
1,200+ banks and major market infrastructures now active

Tokenization Enables New Efficiencies
Faster settlement, reduced costs, and 24/7 trading capabilities

Success Requires Infrastructure & Standards
Interoperable standards, digital identity, robust custody, and integration with existing market infrastructure



Any questions ?

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