

# Regulation & Future: Rules, CBDCs, and What Comes Next

## Mini-Lecture (30 minutes)

Prof. Dr. Jörg Osterrieder

Blockchain, Crypto Economy & NFTs

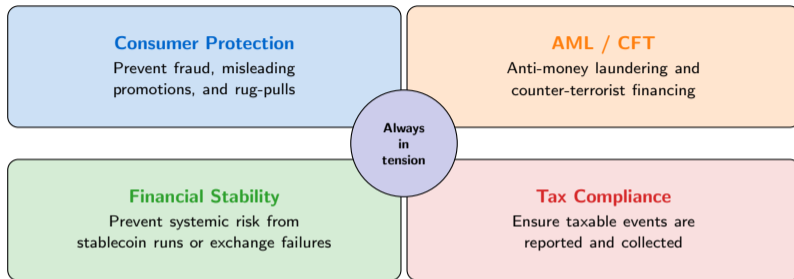
Spring 2026

### Learning Objectives:

1. Explain the four main regulatory objectives and why they sometimes conflict
2. Apply the Howey Test to determine whether a token is a security
3. Compare regulatory approaches: MiCA (EU), FINMA (Switzerland), and US agencies
4. Evaluate CBDC design choices and their privacy trade-offs

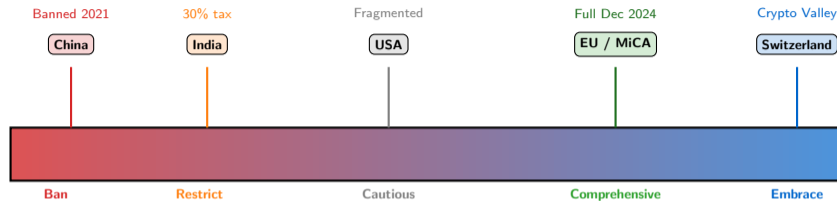
*Synthesises L45–L47 of Module G: Regulation & Future.*

# Why Regulate? The Four Regulatory Objectives



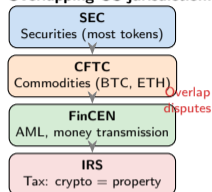
Regulators must balance all four objectives — tightening one often loosens another.

# The Global Regulatory Spectrum



No single approach dominates — the spectrum spans total prohibition to active promotion.

## Overlapping US jurisdiction:



## The Howey Test (1946)

A token is a **security** if it involves:

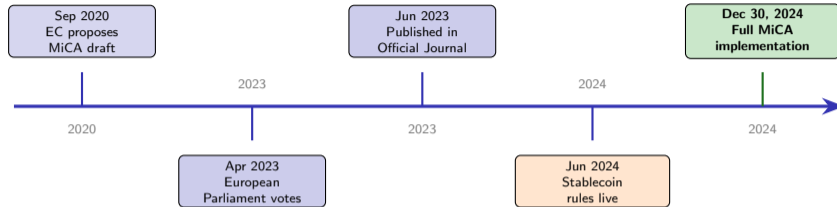
1. An investment of money
2. In a common enterprise
3. With expectation of profits
4. From the efforts of *others*

### Examples:

- Bitcoin → commodity (no central promoter)
- ICO token promising returns → likely security
- Pure utility token (used to pay fees) → unclear

The US has no unified crypto regulator — four agencies claim overlapping jurisdiction.

# EU MiCA: The World's First Comprehensive Crypto Law



**MiCA covers:** Asset-Referenced Tokens (Title II) E-Money Tokens (Title III) Other Crypto-Assets (Title IV) CASPs (Title V)

**MiCA is the world's first comprehensive crypto regulation — full implementation December 30, 2024.**

<p><b>Payment Tokens</b></p> <p>Used as means of payment</p> <p>Bitcoin, Litecoin</p> <p>AML rules apply</p> <p>Securities law: usually NO</p>	<p><b>Utility Tokens</b></p> <p>Access to a product or service</p> <p>Filecoin, BAT</p> <p>Consumer protection</p> <p>Securities law: usually NO</p>	<p><b>Asset Tokens</b></p> <p>Represent a claim on real assets</p> <p>Tokenized bonds, equity tokens</p> <p>Full securities law applies</p> <p>Securities law: YES</p>
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## FINMA vs MiCA

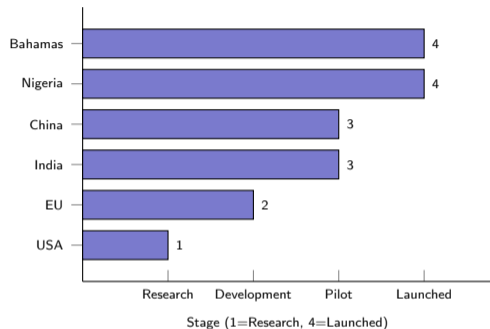
**FINMA** (Switzerland):  
Principles-based, case-by-case, faster approvals

**MiCA** (EU):  
Rules-based, exhaustive categories, legal certainty

Tokens can be **hybrid** (e.g., a utility token that also pays dividends = asset token rules apply).

Over 1,100 blockchain companies operate in Switzerland's Crypto Valley.

# CBDCs: 130+ Countries Exploring Digital Cash



## Key facts:

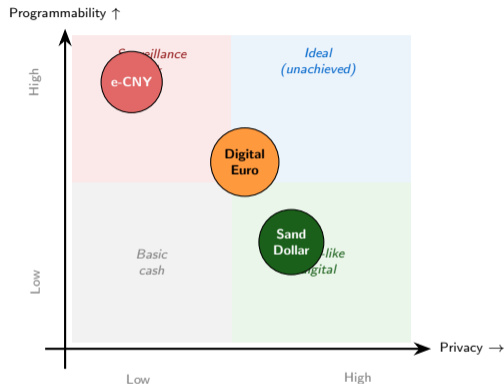
- 3 fully launched retail CBDCs: Bahamas (Sand Dollar), Nigeria (eNaira), Jamaica (JAM-DEX)
- China: e-CNY pilot covers 260M+ wallets
- EU Digital Euro: legislation proposed 2023
- US: research phase only (FedNow  $\neq$  CBDC)

## Why now?

- Cash usage declining globally
- Financial inclusion for unbanked
- Programmable monetary policy
- Counter private stablecoins

Three countries have fully launched retail CBDCs — Bahamas, Nigeria, and Jamaica.

# CBDC Design: The Privacy–Control Matrix



## Key design choices:

- **Account-based** (know the user) vs **token-based** (know the coin)
- **Programmable** (conditional payments, expiry dates) vs **simple**
- **Retail** (citizen wallets) vs **wholesale** (bank settlements)
- **Tiered anonymity**: small amounts anonymous, large amounts KYC

## Core tension

Governments want programmability and traceability.  
Citizens want privacy like physical cash.  
These goals fundamentally conflict.

No existing CBDC achieves both high privacy and high programmability simultaneously.

## Major enforcement actions (2022–2025):

- **Binance** (2023): \$4.3B settlement — largest AML fine in history; CEO pleaded guilty
- **FTX** (2022–24): \$8B fraud; SBF sentenced to 25 years
- **Terraform / Luna** (2024): \$4.5B SEC settlement; Do Kwon extradited to US
- **Kraken** (2023): \$30M for unregistered securities staking

*Total crypto enforcement penalties exceed \$20B since 2022.*

## Future trends (2025–2030):

- **DeFi regulation:** FATF Travel Rule extending to DEXs
- **AI + blockchain:** On-chain AI agents, oracle integrity
- **Tokenized securities:** T+0 settlement, fractional ownership
- **Global minimum standards:** FATF, BIS coordinating rules
- **Regulatory arbitrage:** firms moving between jurisdictions as rules tighten

### FATF Travel Rule

VASPs must share sender and receiver identity for transfers above \$1,000 — closing crypto's AML gap.

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**Total crypto enforcement penalties exceed \$20B since 2022 — regulators are no longer watching passively.**

## Four Things to Remember

1. **Regulation spans a ban-to-embrace spectrum.** MiCA (Dec 2024) is the world's first comprehensive framework; most other jurisdictions remain fragmented.
2. **The Howey Test determines token classification in the US.** If a token offers expected profits from the efforts of others, it is likely a security under SEC jurisdiction.
3. **130+ countries are exploring CBDCs,** but every design faces a fundamental privacy-vs-control trade-off that no country has fully resolved.
4. **Regulatory arbitrage and enforcement are both accelerating.** The FATF Travel Rule sets global AML minimums; penalties exceeding \$20B show regulators mean business.

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Understanding regulation is essential for anyone building or investing in crypto.

**Q1. What are the four main objectives of crypto regulation?**

- A) Speed, privacy, profit, decentralisation    B) Consumer protection, AML, financial stability, tax compliance  
C) Licensing, auditing, reporting, enforcement    D) KYC, AML, GDPR, MiCA

## Quiz — Questions 1–5

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**Answer: B** — Regulators seek to protect consumers, prevent money laundering, ensure systemic stability, and collect taxes.

**Q2. A token gives holders voting rights and a share of protocol revenue. Under the Howey Test, is it a security?**

- A) No — it is a utility token    B) No — only physical assets count    C) Yes — expectation of profit from others' efforts    D) Only if traded on an exchange

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**Answer: C** — Profit expectation from the efforts of a core team satisfies the Howey Test's fourth prong.

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**Answer: B** — Unlike physical cash, a CBDC ledger gives the issuing government full visibility into every transaction.

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**Answers reveal on click. Review any incorrect answers before continuing.**

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**Q10. Which regulatory approach better supports innovation: principles-based (Swiss) or rules-based (MiCA)?**

- A) MiCA always, because clarity prevents fraud B) Swiss always, because speed matters  
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**Answer: C** — Both approaches have merit; the choice depends on whether a project values speed-to-market or EU-wide passporting.

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**Score: 9–10 Excellent | 7–8 Good | 5–6 Review slides | <5 Re-watch lecture.**