

MODULE 1 — CIRCULATION OF VIRTUAL ASSETS: MECHANISMS AND MARKET

ERCM Jean Monnet Module — Legal Regulation of Crypto-Assets: From Basics to Advanced

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1. Introduction and Learning Objectives

1.1. This module introduces the technical and economic mechanisms through which virtual assets circulate in the market, forming the factual foundation on which the legal analysis in the subsequent modules is built. Before a regulator, lawyer, or compliance officer can apply rules such as the EU Markets in Crypto-Assets Regulation (MiCA) or FATF standards, they must understand what actually happens when a crypto-asset is created, transferred, traded, lent, staked, or distributed.

1.2. By the end of this module, students will be able to: (a) explain the role of smart contracts as the technical basis of virtual asset circulation; (b) distinguish between centralized and decentralized exchange models and their respective risk profiles; (c) describe peer-to-peer transaction mechanisms; (d) analyse crypto-asset lending, staking, and GameFi models; and (e) compare token distribution mechanisms, including ICOs, IEOs, IDOs, airdrops, and launchpools.

2. Smart Contracts as the Technical Basis of Circulation

2.1. A smart contract is self-executing computer code deployed on a blockchain that automatically performs predefined actions once specified conditions are met, without the need for an intermediary to enforce performance. Smart contracts underlie virtually every mechanism discussed in this module: token issuance, exchange, lending, staking, and reward distribution are typically implemented as smart contract functions.

2.2. From a legal perspective, smart contracts raise questions of contractual formation, enforceability, error correction, and liability allocation when code behaves unexpectedly or is exploited. Because smart contract code is often immutable once deployed, errors or vulnerabilities can result in irreversible loss of assets, which is a key consideration for consumer protection frameworks such as MiCA's requirements for crypto-asset service providers (CASPs).

3. Centralized and Decentralized Exchanges (CEX / DEX)

3.1. A centralized exchange (CEX) is an intermediary platform, typically operated by a legal entity, that holds custody of users' funds and matches buy and sell orders through an internal order book. CEXs are the primary point of regulatory contact for virtual asset markets, since they can be licensed, supervised, and held to anti-money laundering (AML) and know-your-customer (KYC) obligations.

3.2. A decentralized exchange (DEX) is a protocol, implemented through smart contracts, that enables users to trade crypto-assets directly from their own wallets, without a central custodian. Many DEXs use an automated market maker (AMM) model, where prices are set algorithmically based on the ratio of assets in a liquidity pool, rather than through an order book. DEXs present distinct regulatory

challenges because there is often no single identifiable operator to hold responsible for compliance.

3.3. The legal classification of a given exchange model — and, in particular, whether its operator or protocol developers may qualify as a CASP under MiCA — depends on the specific degree of centralization and control exercised in practice, rather than on the label used by the platform itself.

4. Peer-to-Peer (P2P) Transactions

4.1. Peer-to-peer transactions allow two parties to exchange crypto-assets, or crypto-assets for fiat currency, directly with one another, often through a matching platform that facilitates contact and escrow but does not itself become a counterparty to the trade. P2P mechanisms are widely used in jurisdictions with limited banking access to crypto markets.

4.2. Because P2P transactions can occur off-chain (for the fiat leg) and on-chain (for the crypto-asset leg), they present elevated risks of fraud, chargebacks, and use for money laundering, making them a priority area for the fraud-prevention and due-diligence framework covered in Module 3.

5. Crypto-Asset Lending and Staking

5.1. Crypto-asset lending allows a holder to lend virtual assets to a borrower — either through a centralized platform acting as intermediary or through a decentralized lending protocol — in exchange for interest, typically over-collateralized with other crypto-assets to protect the lender against price volatility.

5.2. Staking refers to the practice of locking crypto-assets to support the operation (validation) of a proof-of-stake blockchain network, in exchange for rewards distributed by the protocol. Staking-as-a-service offerings, where a third party manages the technical process on behalf of the asset holder, may fall within the scope of regulated crypto-asset services depending on the degree of control retained by the provider.

6. GameFi and Play-to-Earn Models

6.1. GameFi refers to blockchain-based games that incorporate financial mechanisms, most commonly the issuance of in-game tokens or non-fungible tokens (NFTs) that can be traded on secondary markets, and “play-to-earn” reward structures under which gameplay generates value transferable outside the game environment.

6.2. The legal treatment of GameFi assets is highly fact-specific: an in-game token that functions purely as a utility item within a closed ecosystem is treated differently from one that is freely tradable, fungible, and marketed with an expectation of profit, which may bring it within the scope of crypto-asset or even financial instrument regulation.

7. Token Distribution Mechanisms: ICO, IEO, and IDO

7.1. An Initial Coin Offering (ICO) is a fundraising mechanism in which a project sells newly created tokens directly to the public, typically in exchange for established cryptocurrencies such as Bitcoin or Ether, usually before the project’s product or platform is fully developed.

7.2. An Initial Exchange Offering (IEO) follows a similar logic but is conducted through, and vetted by, a centralized exchange, which performs a due diligence and listing role and typically manages the token sale process on the project's behalf.

7.3. An Initial DEX Offering (IDO) is conducted through a decentralized exchange or launchpad protocol, typically providing immediate liquidity through an automated market maker pool once the sale concludes.

7.4. Each of these mechanisms raises the question, central to MiCA and to comparable securities-law analyses, of whether the token being offered constitutes a genuine utility token, an asset-referenced token, or an instrument functionally equivalent to a security or other regulated financial instrument.

8. Airdrops and Launchpools

8.1. An airdrop is the free distribution of tokens to a set of wallet addresses, typically used to bootstrap a user base, reward early adopters or holders of a related asset, or decentralize token ownership ahead of a network launch.

8.2. A launchpool is a mechanism through which a platform distributes newly issued tokens to users who stake or lock an existing crypto-asset for a defined period, combining elements of staking (Section 5) and token distribution (Section 7).

8.3. Because airdrops and launchpools often involve no direct payment from the recipient, their legal and tax characterization differs across jurisdictions and is addressed further in Module 4 in the context of the taxation of crypto-assets.

9. Summary and Key Takeaways

9.1. The mechanisms surveyed in this module — smart contracts, centralized and decentralized exchanges, peer-to-peer transactions, lending, staking, GameFi, and the various token distribution models — together constitute the factual infrastructure of the virtual asset market that EU and Ukrainian regulation seeks to address.

9.2. Understanding how a given mechanism actually operates, and who exercises effective control over it, is the necessary first step before any legal classification exercise under MiCA, FATF standards, or national law can be reliably performed. This factual grounding is applied throughout Modules 2 through 4 of the course.