

PRESENTATION

Swiss private law and blockchain

Legal framework, property law, securities, corporate law bankruptcy, successions

Yasmine Sabeti Lange · Sabeti | Legal · www.sabeti-legal.ch · sabetilange@sabeti-legal.ch · +41 79 627 68 85

Agenda

- 01** Introduction to blockchain and crypto-assets
- 02** DLT and property law
- 03** Crypto-assets as securities
- 04** Corporate law questions
- 05** Crypto currencies as means of payment and crypto-currencies as debt
- 06** Crypto-assets in enforcement and bankruptcy
- 07** Crypto-assets and succession
- Q.** Questions

PART I

Technical foundations

Blockchain · cryptography · smart contracts · tokens · wallets

Blockchain

- **Definition.** A distributed digital ledger: a database replicated across multiple independent nodes, kept consistent by a consensus protocol. On public chains (Bitcoin, Ethereum) no single actor controls the network; on permissioned chains, write access is restricted to a defined group of operators.
- **Practical property.** Decentralized · tamper-evident (any alteration is detectable) and tamper-resistant · transparent
- **Variants worth distinguishing.** Public chains (Bitcoin, Ethereum) · permissioned chains (SIX's SDX, central-bank digital-currency pilots) · privacy chains (Zcash, Monero). The legal consequences · AML, traceability, public verifiability · vary across families.

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Blockchain is the technology – not a legal concept

Public / private key cryptography

A general-purpose tool · not specific to blockchain · asymmetric cryptography

- **Identity.** Proving possession of a private key without revealing it.
- **Authorizing actions / Authorisation.** Electronically signing a message or a transaction · the basis of qualified electronic signatures under eIDAS and ZertES.
- **Confidentiality.** Encrypting a communication between two parties.

Well-known applications outside blockchain: HTTPS , qualified electronic signatures, biometric-passport certificates.

On public blockchains, the cryptographic signature is the only way to authorise a transfer · there is no central authority that could do it on the user's behalf.

DOCTRINAL REFERENCE

“We define an electronic coin as a chain of digital signatures. · Nakamoto, Bitcoin Whitepaper, 2008.”

Foundational formulation · useful to explain why control of the key = control of the asset.

Smart contract

- **Definition (ISO 22739:2024).** A program stored on a blockchain whose execution is itself recorded on the ledger. The common label “smart contract” is misleading · it is neither a contract in the sense of the Swiss Code of Obligations (CO) nor necessarily “smart”.
- **Automatic execution.** When the conditions encoded in the program are met, the operation executes and the result is recorded on-chain without human intervention.
- **“Automatic” does not mean “unstoppable”.** Smart contracts often integrate human-intervention mechanisms: multi-signature requirements for large transactions, external data oracles, emergency-pause mechanisms, token-based governance.
- **Anchor in Swiss law.** A smart contract may serve as the registration agreement for a ledger-based security (Art. 973d para. 2 no. 3 CO) and automate the execution of obligations (coupons, transfers, redemption).

Crypto-assets, tokens, coins, wallets

- **“Crypto-asset”** Economic / descriptive term. No statutory definition under Swiss law. An umbrella for any digital asset secured by cryptography. The Debt Enforcement and Bankruptcy Act (DEBA/LP) uses the word without defining it (Art. 242a DEBA).
- **“Token”** A representation of a right or value on a distributed ledger. A useful distinction: (a) native coins issued by the protocol itself (BTC on Bitcoin, ETH on Ethereum) · (b) tokens created by an on-chain program (ERC-20, ERC-721 on Ethereum).

FINMA · ICO GUIDELINES OF 16.02.2018 (as suppl.)

- **Payment token = cryptocurrencies**
- **Utility token = digital access to services**
- **Asset token = participations in real physical underlyings, companies, or earnings streams, or an entitlement to dividends or interest payments. In terms of their economic function, the tokens are analogous to equities, bonds or derivatives**
- **Stablecoins = hybrid format**

Regulatory frame: “coin” and “token” are architectural terms with no regulatory force in themselves.

wallets

- **Wallet.** A tool · software, hardware, even paper · that stores and manages the cryptographic keys conferring control over crypto-assets.
- **The wallet does not contain the coins or tokens.** The assets exist only as entries on the ledger · they never leave it. The wallet holds only the private key that authorises their transfer. Legally: what is transmitted, what is attached, what is confiscated is the control of a key · not an object.

Custodial vs non-custodial

- **Non-custodial wallet.** The user holds their own private keys (software such as MetaMask, hardware such as Ledger or Trezor).
- **Custodial wallet.** A service provider (bank, exchange such as Coinbase or Kraken, institutional custodian such as Sygnum) holds the keys on the client's behalf.
- **Why the distinction matters legally.** Bankruptcy (Art. 242a LP presupposes a custodian) · succession (non-custodial wallets depend on access to the mnemonic phrase) · AML (custodial providers are financial intermediaries under Art. 2 para. 3 AMLA / LBA).

Not your keys – Not your coins

PART II

Swiss private law and crypto-assets

DLT Act · property law · securities · corporate law · payment · bankruptcy · succession ·

SECTION 1

DLT Act and categorization under property law

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- **Distributed Ledger Act.** Enacted on 25 September 2020, entered into force in stages from 1 February 2021. Switzerland adapted its existing legal framework, to accommodate distributed ledger technology (DLT).
 - **No new category of assets.** According to Federal Council in his dispatch (2019) and majority legal scholars, crypto-assets are **intangible (factual) assets**.
 - **No movable property.**
 - no application of 641, para 2 CC (claim in restitution *revendication*);
 - no defence based on possession or property; Art. 919 CC);
 - no surety in rem (art. 884, para 1, pledge, *droit de gage mobilier*)
 - **Intangible property (payment tokens).**
 - Transfer (sell and purchase), security in accordance with Art. 899 and 900 CC.
 - International Private law. Include choice of law in contract.

Lack of transparency, protection and predictability hinders negotiability

SECTION 2

Crypto-assets as securities

Art. 973d ff. CO · registered uncertificated securities · DLT Act

New category of Securities

Art. 973d et seq CO

Ledger-based security (*droit valeur inscrit*)

≠ uncertificated right (*droit valeur simple*)

≠ intermediated security created by entry in a dedicated register (*papier-valeur intermédié*)

- Transfer function
- Legitimation function
- Protection function

ART. 973d PARA. 2 CO

A ledger-based security is a right which, in accordance with an agreement between the parties:

1.

is registered in a securities ledger in accordance with paragraph 2; and

2.

may be exercised and transferred to others only via this securities ledger.

2 The securities ledger must meet the following requirements:

1.

It uses technological processes to give the creditors, but not the obligor, power of disposal over their rights.

2.

Its integrity is secured through adequate technical and organisational measures, such as joint management by several independent participants, to protect it from unauthorised modification.

3.

The content of the rights, the functioning of the ledger and the registration agreement are recorded in the ledger or in linked accompanying data.

4.

Creditors can view relevant information and ledger entries, and check the integrity of the ledger contents relating to themselves without intervention by a third party.

3 The obligor must ensure that the securities ledger is organised in accordance with its intended purpose. In particular, it must be ensured that the ledger operates in accordance with the registration agreement at all times.

Art. 973d CO · Six conditions for a ledger-based security

ART. 973d PARA. 2 CO

At the root: agreement between the parties

- **Entry in the securities ledger**
- **Exercise of rights through ledger exclusively**
- **Creditor's power to dispose.** The register confers on the creditor alone the technical ability to dispose of their rights.
- **Integrity protection.** Appropriate technical and organisational measures to avoid tampering; joint management by independent participants is named as an example, not a requirement.
- **Registration agreement.** Content of rights, operating rules and registration agreements are recorded in the ledger attached rights.
- **Individual verifiability.** Each creditor must be able to verify their own data without third-party intervention.

Consequences and multilateral trading

- **Issuer scope.** Any debtor of a transferable right may issue ledger-based securities (Art. 973d para. 1 CO): SA, GmbH, cooperative, foundation, association · even a natural person for claims.
- **Effects · through the register.** Legimation (Art. 973e para. 1 no. 2 CO) · Transfer in accordance with the agreement between the parties (Art. 973f para 1) · creation of security interests without transfer (Art. 973g CO) · judicial cancellation in case of loss of the power of disposal (Art. 973h CO).
- **Multilateral trading.**

ART. 73A-73F FMIA (LIMF) · DLT TRADING SYSTEM

“DLT Act of 25 September 2020, in force since 1 August 2021. A platform offering several participants the non-discretionary, professional matching of bids on DLT uncertificated securities falls under this specific regime · which permits direct participation by retail clients.”

First licence: BX Digital AG, 12 March 2025

SECTION 3

Corporate law: Tokenized Shares and others

DLT Act

Corporate law · tokenised shares

- **Established framework** . Art. 622 para. 1 CO allow the issuance of registered shares and participation certificates as registered uncertificated securities, subject to corresponding provision in the Articles of incorporation and meeting of the conditions of Art. 973d
- **CMTA Standards (Capital Markets and Technology Association)**
- **Open questions:**
 - **Vinkulierung**. Under Art. 685a CO (transfer-restricted registered shares), social rights transfer only after board approval (Art. 685c para. 1 CO).
Theoretically, possible
 - **Shareholder ledger**. In relation to the company the shareholder or usufructuary is the person entered in the share register (art. 686, para 4 CO)
 - **Beneficial owners ledger**. UBO disclosure

*Art. 622 CO: The shares may be either registered or bearer shares. They may be issued in the form of negotiable securities. The articles of association may stipulate that they may be issued as uncertificated or **ledger-based securities** in accordance with Article 973c or 973d, or as intermediated securities in accordance with the Intermediated Securities Act (FISA) of 3 October 2008*

SECTION 4

Means of payment and crypto-currencies as debt

Federal Act on currency and payment instrument / Code of Obligation and Code of Civil Procedure

Cryptocurrencies as means of payment

Canton Zug accepts payment of tax in Bitcoing or Ethereum · However no legal tender in Switzerland

ART. 2 LUMMP

“Legal tender consists of: a. metal coins issued by the Confederation; b. banknotes issued by the Swiss National Bank; c. sight deposits in Swiss francs at the Swiss National Bank.”

LUMMP · Federal Act on Currency and Payment Instruments, SR 941.10.

FEDERAL SUPREME COURT 6B_99/2019, 18.04.2019

“Cryptocurrencies are parallel currencies created by private actors · a mere Tauschmittel (means of exchange) · not legal tender. Governed by the rules on barter contracts (Art. 237 ff. CO), not by Art. 84 CO.”

- **Practical consequence.** Settlement of CHF debt cannot be imposed in cryptocurrency. The creditor is only bound to accept legal tender
- **Tendering Bitcoin without agreement does not discharge the debt.** The debt remains.
- **Stipulation of payment in crypto-currency and Swiss francs.** Clause is valid (liberty of contract). Determination of exchange value?
- **Voluntary acceptance from the creditor.** The creditor may voluntarily accept payment in Bitcoin. However, is this a datio in solutum or shall the value of the crypto-currency be deducted from the debt in CHF? Interpretation of contract.

Contract which object is a crypto-currency

- **Timing of settlement.** Normally after 6 confirmations (around 1 hour) for bitcoins. To be included in the contract.
- **Default interest.** Automatic 5 % default interest (Art. 104 CO) does not apply because Bitcoin is not a “sum of money” within the meaning of Art. 84 CO. The general regime applies: Art. 102 CO (notice of default), Art. 103 CO (enhanced liability of the debtor in default). Include penalty in the contract.
- **Damages for the absence of performance.** Creditor can either waive performance and claim for positive damages or withdraw from contract and claim for negative interests (reliance interests).
- **Specific performance.** The LP does not apply to non-monetary obligations (Art. 38 LP). Enforcement in accordance with the Rules of Civil Procedure (CPC). Creditor shall file an action for performance (Art. 84 para 1 CPC), together with direct execution (Art. 343 para. 1 CPC) and / or daily penalty and threat of criminal sanctions under Art. 292 Swiss Criminal Code (SCC).

SECTION 5

Bankruptcy of the wallet provider

DLT Act

Wallet provider bankruptcy · context

- **The principle.** On Bitcoin, whoever holds the private key controls the coins · not the person who bought them. Depositing Bitcoin with a custodial provider means handing over the key · the client's balance is only an entry in the custodian's database.
- **Before 2021.** Art. 242 LP only covered tangible objects. Crypto-assets deposited with a bankrupt custodian fell into the estate and the client became an unsecured creditor.
- **DLT Act · second phase.** Art. 242a LP (in force since 1 August 2021) creates a right of restitution for crypto-assets deposited with a bankrupt custodian, subject to conditions. Twin regime for licensed banks: Art. 16 para. 1bis Banking Act (segregation outside the estate).

Art. 242a LP · conditions for restitution

ART. 242A LP

“(para. 1) The bankruptcy administration shall issue a decision on the restitution of the crypto-assets over which the bankrupt has the power of disposal at the opening of bankruptcy. (para. 2) Restitution is warranted where the bankrupt has undertaken to keep them available at any time to the third party and where they: a. are individually attributed to that third party, or b. are attributed to a community and the third party's share is clearly determined.”

Three layers · factual prerequisite · contractual commitment · attribution.

- **Factual prerequisite (para. 1).** The bankrupt estate effectively and exclusively holds the power of disposal (control of the keys).
- **Contractual commitment (para. 2).** The bankrupt estate has undertaken to keep the crypto-assets “available at any time” to the third party.
- **Attribution (para. 2 lit. a / b).** Either individual attribution (sub-accounts, sub-wallets) or attribution to a community with a clearly determined share (internal registers, sub-ledgers, allocated omnibus accounts).

Art. 242a LP · outcomes and limits

- **If all conditions are met.** The crypto-assets are legally the client's · restitution, not distribution to the estate.
- **If the assets were commingled.** No restitution. The client becomes an unsecured creditor (3rd class).
- **Fractional reserves.** Crypto-currency lent or fractionned breach the “available at any time” undertaking in para. 2 of 242a. LP · loss of Art. 242a LP protection.
- **Cooperation (Art. 222 LP).** General duty of disclosure and provision (Art. 222 para. 1 LP · under threat of Art. 163, 323 SCC); extended to third parties (Art. 222 para. 4 LP · Art. 324 SCC) relevant for multisig co-signers and custodians. ATF146 III 435 · extension by analogy to agents. An honest caveat: the duty is not self-executing · if the bankrupt refuses or has lost the key, the asset remains technically irrecoverable.

ART. 242B LP · RESTITUTION OF DATA

“Any third party who establishes a legal or contractual right to data over which the estate has the power of disposal may demand access to it or its restitution.”

Art. 271 LP · ATTACHMENT

(Payment) tokens are attachable assets. BGE 148 IV 74 criminal proceedings

SECTION 6

Successions

Crypto-assets and successions

ART. 560 PARA. 1 CC

“Heirs acquire the estate as a whole by operation of law as soon as it is opened.”

The DLT Act (01.08.2021) did not amend the succession rules of the CC.

- **Frame.** Swiss succession law (Art. 457 ff. CC) contains no crypto-specific provision. Crypto-assets enter the estate by universality, by operation of law (Art. 560 CC).
- **Custodial Wallet.** Contractual clauses typically provide for heir access on proof of heirship (probate).
- **Non-custodial.** Without access to the mnemonic phrase or keys, the assets are technically lost.

Recommended practice

- **Distribute the seed phrase to access the hardware including the key to 3 different persons across three locations.** At least one notary or executor of the will.
- **Clearly reference your crypto-assets in your will and give instructions to your heirs about where to find the hardware wallet and the seed phrase.** Keep separated from the seed phrase.

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Questions?

Thank you for your attention!

Yasmine Sabeti Lange · Sabeti | Legal · www.sabeti-legal.ch · sabetilange@sabeti-legal.ch · +41 79 627 68 85