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Supplementing MiCAR with Private Law: Liechtenstein Law as a Model?

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Abstract

Die Arbeit kommt zu dem Schluss, dass MiCAR und TVTG zwar sehr ähnliche Grundziele haben, aber im Ergebnis unterschiedliche Schwerpunkte setzen. Die MiCAR ist im Wesentlichen aufsichtsrechtlicher Natur und enthält nur wenige privatrechtliche Regelungen. Diese orientieren sich an der Verbraucherschutzrichtlinie und sind spezifisch für verschiedene Arten von Kryptowährungen definiert. Im Gegensatz dazu steht das TVTG, das zwar auch aufsichtsrechtliche Aspekte aufweist, im Vergleich dazu aber deutlich schlanker und damit auch wirtschaftsfreundlicher ist.

Hervorzuheben sind vor allem die neuen sachenrechtlichen Regelungen des TVTG. Der liechtensteinische Gesetzgeber hat neue sachenrechtliche Begriffe und ein speziell auf Kryptowährungen zugeschnittenes Regelwerk geschaffen. Gerade diese Regelungen bieten sich für eine Ergänzung des MiCAR an, da dieses keine entsprechenden Aussagen trifft. Durch die Ergänzung der sachenrechtlichen Regelungen könnte ein harmonisiertes europäisches Regelwerk geschaffen werden, das die Adaption von Kryptowährungen unterstützt und die EU als Kryptowährungsstandort etabliert.

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Abbreviations

ART: Article

BuA: Bericht und Antrag

CASP: Crypto-Asset Service Provider

CRD: Consumer Rights Directive

DLT: Distributed Ledger Technology

EAA: European Economic Area

EMT: Electronic Money Token

EU: European Union

ibid: ibidem (in the same place)

i.e.: id est (that is)

lit.: letter

MiCAR: Markets in Crypto-Assets Regulation

NFT: Non-Fungible Token

No: Number

OTC: Over-the-Counter

SchIT PGR: Schlussbestimmungen zum Personen- und Gesellschaftsrecht

TT: Token Transfer

TVTG: Token- und VT-Dienstleistungsgesetz

WPPG: Wertpapierprospektgesetz

1. Introduction

Since the launch of Bitcoin in 2009 by Satoshi Nakamoto¹, the crypto-sphere has rapidly evolved from a niche cipher-punk phenomenon to a widely integrated and used technology. This growth has led to a significant increase in economic relevance. The hack of the Mt. Gox exchange and the subsequent collapse of the FTX exchange, which caused an estimated \$8 billion in damage, showed that the sector is still young and immature regarding user protection and regulation. The risk of significant economic harm, on the one hand, and the potential for the rise of innovative new financial technologies, on the other, has prompted the EU to respond with new legislation.

The Markets in Crypto-Assets Regulation (MiCAR)² was decided on 20. April 2023 and came into force on June 29, 2023. MiCAR aims to create a harmonised European regulatory framework for Crypto-assets that promotes innovation and enables the potential of Crypto-assets to be exploited while safeguarding financial stability and investor protection.

The framework focuses on the regulation of key economic actors in the crypto space, such as crypto asset service providers (CASPs), custodians, or trading platform operators, while leaving open questions regarding the private law nature of the transfer and ownership of crypto assets. In that regard, the regulation is dominated by public law provisions and merely contains a private law framework. The lack of private law regulation in MiCAR opens the question of what a possible private law regulatory framework could look like.

One country that has regulated this area of law and is geographically, politically, and legally linked to the European Union is Liechtenstein. Liechtenstein is part of the European Economic Area (EEA) and adopted the Liechtenstein Blockchain Act, called „Gesetz über Token und VT-Dienstleister“ or „Tokens and TT Service Providers Law“ (TVTG). The law is one of the first in the world to substantially regulate private law in relation to blockchain technology, in addition to corporate and due diligence law.

This raises the question of whether Liechtenstein's approach to regulating private law in relation to blockchain is suitable as a model for European Union legislation and can be used as supplementary law.

¹ Satoshi Nakamoto, 'Bitcoin: A Peer-to-Peer Electronic Cash System' (2008) <https://bitcoin.org/bitcoin.pdf> accessed 22 July 2024.

² Regulation (EU) 2023/1114.

2. Overview of Distributed Ledger Technology

Distributed Ledger Technology, Blockchains, and Cryptocurrencies have all been subject to public discussions in recent years. While some argue in favor of a revolutionary decentralized concept that can be applied to various problems, others are more reserved about acknowledging the groundbreaking effects. To understand the substance and the reason for regulation, it is crucial to understand the fundamental functioning of the underlying technology.

2.1 Distributed Ledger Technology and Blockchain

DLT refers to a novel and rapidly evolving approach to recording and sharing data across multiple data stores (or ledgers). This technology allows transactions and data to be recorded, shared and synchronised across a distributed network of different network participants.³ DLT is based on public-key cryptography, a cryptographic system that uses pairs of keys: public keys, which are publicly known and essential for identification, and private keys, which are kept secret and used for authentication and encryption.⁴

One of the most famous DLTs is Bitcoin. A blockchain is a decentralised database with the help of which transactions can be carried out.⁵ Within the network, tokens are usually stored and transferred in packets in a (Bitcoin) database, which are called “blocks” and are linked together in a digital “chain”, which is why they are referred to as a blockchain. Blockchains use cryptographic and algorithmic methods to record and synchronise data via a decentralised network (peer-to-peer network - i.e. without the intervention of third parties) in a way that is (as far as possible) unchangeable. For this purpose, each block typically receives a hash (control value - comparable to a digital fingerprint) of the previous block and a timestamp and transaction data.⁶

A simplified explanation of a blockchain is to understand it as a public notebook, where each piece of information is published and can be verified by each party. The information in the notebook can be changed if most of the participating parties can agree on the change of information. The new information is then added to the notebook. In this way, each party can trace the information change and be sure that the current information is valid.

³ World Bank, 'Distributed Ledger Technology and Blockchain' (FinTech Note No 1, 2017) 1 <https://documents1.worldbank.org/curated/en/177911513714062215/pdf/122140-WP-PUBLIC-Distributed-Ledger-Technology-and-Blockchain-Fintech-Notes.pdf> accessed 15 July 2024.

⁴ ESMA, 'Advice on Initial Coin Offerings and Crypto-Assets' (ESMA50-157-1391, 9 January 2019).

⁵ Büchel, Technische Grundlagen, Sild (ed), 'Grundsatzfragen des liechtensteinischen TVTG' (2021) 6.

⁶ Eckhold and F Schäfer, '§ 17 Kryptowerte, Kryptowährungen und Kryptowertpapiere' in Assmann, Schütze and Buck-Heeb (eds), Handbuch des Kapitalanlagerechts (6th edn, 2024).

2.2 Types of Blockchains

Blockchains can be separated into public and private blockchains. Public blockchains such as Bitcoin, Ethereum or Solana are the most prominent. The key element that distinguishes a public blockchain from a private blockchain is the element of access. Public blockchains are accessible to everyone meaning anyone with the technical capabilities, can participate in the network. Users can setup a client and participate in the network. There is no central entity that determines who can participate.

A private blockchain requires not only the technical basics but also the permission of either all the other participants in the network or a central authority. The blockchain initiator sets the primary fundamentals of who can decide access. They can set certain requirements in advance or simply limit the number of participants who have access to the blockchain.

Another third category that is being discussed is the so-called consortium blockchain. A consortium blockchain is a blockchain that can be more like a public or private blockchain, depending on its specific design but is open to everyone.⁷

According to the proponents of that concept, the nature of a consortium blockchain is that it is a mix of a public and private blockchain. The essential characteristic is the participation via invitation or after fulfilling certain requirements. Typical cases of consortium blockchain would be a blockchain between large corporations.

Furthermore, Blockchains can be categorized into permissioned and permissionless blockchains. Permissionless blockchains have no restrictions for network participants. Anyone can execute transactions and check the validity of the network.⁸ A private and a public blockchain can be permissionless.

Permissioned blockchains have restrictions, which limit network participation. Only chosen network participants may send transactions or check the network's validity.

⁷ Wüst and Gervais, 'Do You Need a Blockchain?' in Crypto Valley Conference on Blockchain Technology (2018) 45.

⁸ Völkel, 'Grundlagen der Blockchain-Technologie und virtueller Währungen' in Hanzl, Pelzmann and Schragl (eds), Handbuch Digitalisierung (2021) 6.

2.3 Characteristics of Public Blockchains

Due to the fact that public blockchains are the dominant case and the main target for regulation, the core features have to be outlined.

The key feature of blockchains is decentralisation. Decentralisation means that there is no central authority, but rather multiple independent parties that influence decision-making in the network. The degree of decentralisation varies from blockchain to blockchain and must be viewed on a spectrum rather than as an absolute concept.

Another key element of most public blockchains, such as Bitcoin, Ethereum or Solana is the element of permission. The majority of the bigger public blockchains require, other than the technical requirements, no permission to participate.

Furthermore, public blockchains, unless they use encryption mechanisms, are transparent and provable. This means that anyone can check the status, balances and transactions on the network.

Finally, immutability. This means that once a block has been added to the blockchain, it is extremely difficult to change the information in that block. It is only possible if the majority of the network agrees to 'roll back the blockchain,' which means changing the entire ledger. This immutability ensures that the data is tamper-proof and trustworthy.

2.4 Consensus Mechanisms

The term consensus mechanism refers to the entire stack of protocols, incentives, and ideas that allow a network of nodes to agree on the state of a blockchain.⁹ A network needs to reach a consensus for each transaction that is submitted. Consensus mechanisms play a crucial role in the blockchain architecture and aims to prevent the risk of a so-called 51% attack, where a malicious actor attempts to manipulate the state of the blockchain by gaining 51% majority power in the network. By providing a certain threshold for validating transactions, that risk is minimized.

The two main consensus mechanisms are Proof of Work (Bitcoin) and Proof of Stake (Ethereum).

Proof of work determines that the network participant, the miner, that solves a complex mathematic problem the fastest may implement the next transaction into the block. The solution

⁹ 'Consensus Mechanisms' (Ethereum, n.d.) <https://ethereum.org/en/developers/docs/consensus-mechanisms/> accessed 17 June 2024.

of the task can be validated by the other miners to reach the quorum, which is necessary for the transaction to be valid.

Blockchains based on the Proof of Stake consensus mechanism derive their crypto-economic security from a set of rewards and penalties applied to capital locked by stakes.¹⁰ In other words, each network participant (validator) must lock a certain amount of tokens to gain the privilege of validating transactions. The validator that creates the next block is chosen through a random selection process, often influenced by the size and duration of its stake. Once selected, the validator proposes a new block, which is then validated by other validators. The network reaches a consensus through an agreement process, such as voting, to finalise the block and add it to the blockchain.

2.5 Nodes

Base element of every blockchain are nodes. They can be allocated different tasks depending on the blockchain structure and the implemented consensus mechanisms. Tasks may include verifying transactions, mining or validating transactions, or hosting wallets.¹¹

Often, nodes receive a reward for providing these services, which is paid out in the native blockchain token currency. Nodes play a crucial role in the blockchain network, as they are one of the key factors that determine the degree of decentralisation of a network, depending on the geographical and ownership distribution.

2.6 Public and Private Key

Cryptographically generated keys are used to structure and verify the authorisation of transactions on the blockchain. The public key can be compared to a public registered IBAN. It is paired with the private key and serves as an identification key. It can be given to third parties to receive transactions. Third parties can also use the public key to look up transaction history and funds on the network, which leads to a high level of transparency and provability. Private keys can be compared to a cryptographically generated password. Together with the public key, they give the user access and power over their funds. To transact and sign the transaction of funds, it is necessary to have a private key.

¹⁰ Ibid.

¹¹ Berentsen/ Schär, Bitcoin, Blockchain und Kryptoassets (2017), 98.

2.7 Smart Contracts

Smart contracts are program codes deployed on blockchains. They can be understood as a set of rules that are coded and automated when certain digital conditions are met. The most commonly used smart contracts are in the field of decentralised finance (Defi) for exchange, lending, borrowing and derivatives trading of cryptocurrencies (e.g. Uniswap, Aave, GMX).

3. MiCAR

The Market in Crypto Assets Regulation, or MiCAR for short, was adopted in June 2023 and aims to provide a clear rulebook for the crypto market. Lawmakers responded to the need for legal certainty and European harmonisation, which has resulted from the increase in trading activity in the crypto ecosystem. The EU is the first major jurisdiction to create such a comprehensive cryptocurrency regulation, as it seeks to set a new standard for global cryptocurrency regulation.

The Regulation focuses on the classic concerns of financial market law - i.e., individual and institutional investor protection as well as market integrity and financial stability – while also promoting innovation and enabling the full potential of crypto assets to be utilized.¹²

3.1 Overview

MiCAR regulates issuers of Crypto-assets and crypto-asset service providers, aiming to cover all Crypto-assets not previously regulated under financial services legislation.

The regulation applies to all natural and legal persons and certain other undertakings that are engaged in the issuance, offer to the public, and admission to trading of Crypto-assets or that provide services related to crypto-assets in the Union.¹³ The geographical scope is limited to all crypto-assets that are issued and traded in the European Union¹⁴. De facto, this means that most of the world's Crypto-assets fall within the scope of MiCAR, as most of the time, trading is not geographically restricted and accessible from the European Union.

The material scope of the application covers Crypto-assets. According to the legal definition of Art. 3 (1) No. 5 crypto asset is a digital representation of a value or of a right that is able to be transferred and stored electronically using distributed ledger technology or similar technology. Crypto-assets are categorised into different kinds: Asset-referenced tokens, E-money tokens, and utility tokens.

¹² Recital 112, Regulation (EU) 2023/1114.

¹³ Article 2 (1) Regulation (EU) 2023/1114.

¹⁴ Ibid.

Assets-referenced tokens (ART) are crypto assets other than E-money tokens, the value of which is to be preserved by reference to another value or right or a combination thereof, including one or more official currencies.¹⁵

E-money tokens (EMT) are legally defined in Art. 3 (1) (7) MiCAR as a type of Crypto-asset that purports to maintain a stable value by referencing the value of one official currency.

ART and EMT are also called stablecoins because they are pegged to another asset that is supposed to provide price stability. Its price stability makes it a popular medium of exchange in centralised and decentralised applications, as other Crypto-assets are volatile.

Utility token is defined in Art. 3 (1) (9) MiCAR is a type of Crypto-asset that is only intended to provide access to a good or a service supplied by its issuer. These kinds of tokens are often way more volatile and do not have any stable characteristics, as the only price relation they have is the product and service they are connected to.

Differentiated from these tokens and not regulated under the MiCAR are Nonfungible tokens (NFT).¹⁶

To protect consumers and inexperienced market participants, the lawmakers established the obligation to publish a whitepaper (Art. 4 (1)), whitepaper liability (Art. 15 (1)), and the right of withdrawal (Art. 13).

In addition, MiCAR regulates the offering and issuance of ARTs and EMTs to the public and regulates certain requirements such as whitepaper, organisational, conduct and prudential requirements. It also regulates the conditions to be fulfilled by Crypto Asset Service Providers (CASPs). To prevent unfair practices MiCAR also establishes market conduct rules to restrict market abuse in the crypto-market.

3.2 Private Law Regulation

Although MiCAR can be seen primarily as a public law regulation governing how and whether companies can participate in the crypto market, it also contains some private law provisions influenced by consumer protection law aimed at protecting new, inexperienced market participants. The following sections analyse and highlight these provisions.

¹⁵ Article 3 (1) Regulation (EU) 2023/1114.

¹⁶ Article 2 (3) Regulation (EU) 2023/1114.

3.2.1 Art. 13 MiCAR Right of Withdrawal

Art. 13 (1) MiCAR has structural similarities to the European consumer rights directive, as it provides retail holders a right of withdrawal from the purchase of Crypto-assets other than ART and EMT the right of withdrawal.

The requirements to exercise the withdrawal can be broken down into different points:

Subject

Firstly, the subject must be a crypto-asset and thus fall under the definition in Art. 3 (1) (5) MiCAR. It should not be qualified as an ART and EMT since these kind of tokens are anyway redeemable against their pegged asset and thus should not require any right of withdrawal.

Parties

In addition, the claimant must qualify as a retail holder. According to Art. 3 (1) (37) MiCAR, a retail holder is any natural person who is acting for purposes that are outside that person's trade, business, craft, or profession. This definition equals the definition of the consumer in the consumer rights directive, which is one of the similarities to consumer rights law (Art. 2 (1) Directive (EU) 2011/83) and indicates the telos of the provision to protect users that are in an imbalance of power.

The other party must be the offeror, according to Art. 3 (1) (13) MiCAR is a natural or legal person, or other undertaking, or the issuer, who offers Crypto-assets to the public or crypto-asset provider so according to Art. 3 (1) (15) MiCAR a legal person or other undertaking whose occupation or business is the provision of one or more crypto-asset services to clients on a professional basis, and that is allowed to provide crypto-asset services in accordance with Art. 59 MiCAR.

Purchase

The retail holder must have purchased Crypto-assets from the offeror or crypto-asset provider. How and when Crypto-assets must be purchased in order to exercise the right of withdrawal is not explicitly regulated. The general terminology is open-ended and could cover different types of purchase contracts. The wording covers both purchase transactions inside and outside regulated exchanges (over-the-counter, OTC).¹⁷

¹⁷ Maume, 'Das Widerrufsrecht nach MiCAR' (2023) Recht Digital 493.

In order to prevent abuse of the right of withdrawal to the detriment of the offeror, Art. 13 (4) MiCAR restricts the exercise of the right of withdrawal. Accordingly, the purchaser may not exercise the right of withdrawal if the tokens have been admitted to trading before being purchased by the retail holder. In this way, the holder is unable to exercise the right of redemption because the market value of the purchased asset falls. Again, this concept can be found in the Consumer Rights Directive (Art. 16 lit. b).

Prior admission to trading includes the admission of Crypto-assets to trading on a trading platform for Crypto-assets within the meaning of Art. 1 (2) lit. a MiCAR. The tokens do not necessarily have to be purchased on such a regulated platform. It is only important that there is a general market price on such a platform for the purchased tokens, as this could motivate holders to exercise their right of withdrawal.¹⁸

To avoid a circumvention by the offeror, the right of withdrawal may still be exercised by the holder if the purchasing or trading occurred outside of the scope of MiCAR.¹⁹

Exercise and Legal Consequence

The withdrawal must be declared to other party 14 days after the agreement was made. The time period may be shorter if the offeror set a time limit on their offer to the public in accordance with Art. 10 MiCAR (Art. 13 (5) MiCAR).

The legal consequence of the withdrawal is that the offeror or crypto-asset provider must reimburse the retail holder all payments that he made, in 14 days after he declared the withdrawal (Art. 13 (2) MiCAR). The offeror or crypto-asset provider must reimburse the whole amount and needs to cover fees that occurred, such as transaction fees or exchange fees. In other words, the ex-ante economic situation of the retailer must be restored. The payment should be carried out the same way that the initial transaction was done unless the parties agree to another transaction method (Art. 13 (2) MiCAR).

Art. 13 (3) MiCAR states that the offerors must inform about the right of withdrawal in their crypto-asset whitepaper, which means that it does not interfere with the right of withdrawal in Art. 13 (1) MiCAR. This approach is handled differently in the consumer rights directive, where the consumer is granted an extended time window to exercise the right of withdrawal if the seller does not fulfill the information obligation. This different approach arises from the specific characteristics of capital markets, where individual information rights are replaced by general, abstract information disclosure.²⁰

¹⁸ Recital 37, Regulation (EU) 2023/1114.

¹⁹ Maume, 'Das Widerrufsrecht nach MiCAR' (2023) Recht Digital 493.

²⁰ Ibid.

As a result, the sanction for failing to disclose the right of withdrawal is relevant to the question of white paper liability and not to the question of withdrawal.

Relation to Consumer Financial Services Directive and Consumer Rights Directive

Finally, there is the question of applicability and interference with other EU-Law withdrawal provisions such as the distance marketing of Consumer Financial Services Directive²¹ or the Consumer Rights Directive.

Regarding the distance marketing of consumer financial services directive, the recitals states that if, according to the MiCAR, there is a right of withdrawal, then the Directive 2002/65/EC shall not apply.²² Critics argue that this is inconsistent, as financial instruments are excluded from the scope of application in accordance with Art. 2 (4) lit. a MiCAR, which states that the provisions on financial instruments take precedence.²³

If, on the other hand, a financial service is provided in accordance with Art. 2 lit. b of the Markets in Financial Instruments Directive, the MiCAR right of cancellation takes precedence.

The relationship with the Consumer Rights Directive is more complex as there is no explicit provision clarifying it. As *Maume* points out the previous reasons of consideration for the MiCAR-E stated, that the applicability of other consumer protection provisions shall not be unaffected.²⁴ The reference to the Consumer Rights Directive has been removed in the following version. This lack of regulation leads to uncertainty on the question which right of withdrawal a consumer might be able to enforce. In line with the *lex specialis* doctrine (*generalalia specialibus non derogant*), the applicability of the MiCAR provisions in the event of a conflict seems reasonable, as it provides a framework adapted to the specificities of the crypto economy. This is underlined by the fact, that the lawmakers wanted to close regulation gaps that originated out of the new technology field and not extend the right of consumers. Moreover, the wording of Art. 13 MiCAR suggests protecting retail holders, not consumers which speaks in favour for a parallel applicability of MiCAR and CRD.²⁵

²¹ Directive 2002/65/EC of the European Parliament and of the Council.

²² Recital 37, Regulation (EU) 2023/1114.

²³ Maume, 'Das Widerrufsrecht nach MiCAR' (2023) *Recht Digital* 493.

²⁴ *Ibid.*

²⁵ *Ibid.*

3.2.2 Art. 15, Art 26, Art 52 MiCAR Whitepaper Liability

Similar to prospectus liability, MiCAR also has a liability regime for breach of information duties. The regulation adopts the common practice of publishing whitepapers in the crypto-economy and transforms it into a legal framework. The notification and publication of a whitepaper is mandatory in order to obtain admission to trading.²⁶ The Regulation also rules the content and form of the whitepaper in order to ensure an industry standard and to protect retail investors.²⁷ The whitepaper liability is regulated for ART (Art. 26 MiCAR), E-Money (Art. 52 MiCAR) and Crypto-assets other than asset referenced token and E-Money (Art. 15 MiCAR).

Parties

Claimant is the holder of crypto assets, EMT or ART. The addressees of liability differ, depending on the category of token. For Crypto-assets, the addressees are, according to Art. 15 (1) MiCAR, the offeror, the person seeking admission to trading, or the operator of a trading platform and their members of its administrative, management, or supervisory body.

For E-Money and ART the liability addressee is the issuer a natural or legal person, or other undertaking, who issues Crypto-assets.²⁸

Breach of Duty

The whitepaper liability requires that the whitepaper is not complete, fair or clear, or that is misleading whitepaper.²⁹

The whitepaper is not complete if not all the information required for the potential crypto asset holder is available. The required information is set out for each sort of token in Art. 6, 19 and 51 MiCAR.³⁰ What is not clear is whether the whitepaper is already incomplete if only minor pieces of information are missing, or whether a certain quality of incompleteness is required. Looking at the Regulation, it can be said that the legislator has made clear provisions on the standard and form of white papers, suggesting that the listed information is considered essential for retail holders. On the other hand, the purpose of the whitepaper duty is to ensure that retail investors have the information they need to invest responsibly. This could mean that they only care about relevant information and not about every little detail. According to *Buck-Heeb* it is

²⁶ Articles 5(1)(c), 5(1)(d), 18(2)(k), and 48(1)(b), Regulation (EU) 2023/1114.

²⁷ Articles 6, 19, and 51, Regulation (EU) 2023/1114.

²⁸ Article 3(1)(10), Regulation (EU) 2023/1114.

²⁹ Articles 15, 26, and 52, Regulation (EU) 2023/1114.

³⁰ Articles 6, 19, and 51, Regulation (EU) 2023/1114.

also against the telos of the provision since the absence of marginal information has no (added) value for the retail investor when making a purchase decision.³¹

The exact definition of not fair is still being debated. One understanding is, that information in the whitepaper must not be designed for unequal treatment.³² Others interpret it the way that information must not be inaccurate and must also include assessments that make an investment less attractive.³³

The information contained in the white paper should also be clear and comprehensible.³⁴ Information is unclear or incomprehensible if it leaves room for interpretation and thus misunderstanding on the part of the potential buyer.³⁵

Furthermore, it should contain information that could mislead the buyer.³⁶ This is the case if it is fundamentally accurate but may give the investor a false impression of the opportunities and risks of the investment because it reflects only "half the truth".³⁷

This obligation does also partly apply to the summary of a whitepaper.³⁸ The publication of a summary is also mandatory and aims to provide a quick overview of the essential facts for the investor. The summary should not be misleading, inaccurate or inconsistent. It does not need to be complete, as the nature of a summary is to omit information and focus on the essential elements of the token.

Nevertheless, when read in conjunction with the parts of the whitepaper, it must provide key information to assist prospective holders of the crypto asset, to avoid any information gaps or inconsistencies.³⁹

Causality and Burden of Proof of Liability

If there is a present breach of duty of care, the crypto asset holder must prove that he bought the crypto asset based on the wrongful information.⁴⁰ This means that the burden of proof for the matter of causality of damage is on the crypto asset holder, which weakens the possibility of liability claim of the holder. The rule has also been criticised, because it's incompatible with

³¹ Buck-Heeb, 'Whitepaper-Haftung nach MiCAR' (2023) Zeitschrift für Bank und Kapitalmarktrecht 689.

³² Siadat, 'Markets in Crypto Assets Regulation – erster Einblick mit Schwerpunktsetzung auf Finanzinstrumente' (2021) Recht der Finanzinstrumente 12 (17).

³³ Moritz, Klebeck, Jesch and Busse, 'Mindestangaben im Verkaufsprospekt' in Frankfurter Kommentar zum Kapitalanlagerecht (2019) § 269 para 34.

³⁴ Article 15(1), Regulation (EU) 2023/1114.

³⁵ Buck-Heeb, 'Whitepaper-Haftung nach MiCAR' (2023) Zeitschrift für Bank und Kapitalmarktrecht 689.

³⁶ Article 15(1), Regulation (EU) 2023/1114.

³⁷ Assmann, Schneider, Mülbert and Buck-Heeb, 'Regulation (EU) No 1286/2014' in Wertpapierhandelsrecht (8th edn, 2023) Art 6 para 2.

³⁸ Articles 15(5), 26(4), and 52(4), Regulation (EU) 2023/1114.

³⁹ Article 15(1)(b), Regulation (EU) 2023/1114.

⁴⁰ Articles 15(5), 26(3), and 52(3), Regulation (EU) 2023/1114.

the fraud on the market theory, as the wrongful information is always priced into the market, meaning that the crypto-asset holder has bought for a different price.⁴¹ This is particularly the case in crypto markets, where the impact of information leads to remarkable volatility and price shifts due to the comparatively low level of liquidity in the market.

On the other hand, the crypto market is still young and does not have as many sophisticated investors as mainstream financial markets, leading to information inefficiencies that would run counter to the fraud-on-the-market theory. Also, the pricing of crypto-asset is typically not done through a bookbuilding procedure as stated by *Zickgraf*, which would also be an argument against the effect of the fraud on the market theory in the crypto-market.⁴²

Culpability

Another question that arises out of the breach of duty of the issuer is the element of culpability. The Regulation does not require any culpability on the part of the issuer, i.e. the issuer needs only objectively fail to comply with the obligation to publish a whitepaper. This strengthens the position of the crypto-holder by because there is no need for a subjective culpa element. After all voices in the literature have been emphasizing the need for subjective culpability regarding whitepaper liability.⁴³ According to *Zickgraf* the current regulation of whitepaper liability leads to excessive diligence in the preparation of disclosure documents resulting in the waste of economic resources.⁴⁴ He argues that the requirement of a mere objective breach of duty is not adequate if one considers that the occurring damage is a redistribution damage, which in regards to the national economy, is not substantial enough to justify such a high compliance level.⁴⁵ Furthermore, it is systemically common to require culpability in relation to EU prospectus liability laws and there is no compelling argument why whitepaper liability should be treated more strictly than other prospectus liability.⁴⁶

This understanding is also backed by the aim of MiCAR to support innovation and competition, while allowing crypto-asset providers to scale up their businesses.⁴⁷

⁴¹ Zickgraf, 'Primärmarktpublizität in der Verordnung über die Märkte für Kryptowerte' (2021) Zeitschrift für Bank- und Kapitalmarktrecht 362.

⁴² Ibid.

⁴³ Maume, 'Die Verordnung über Märkte für Kryptowerte (MiCAR)' (2022) Recht Digital 461,

⁴⁴ Zickgraf, 'Primärmarktpublizität in der Verordnung über die Märkte für Kryptowerte' (2021) Zeitschrift für Bank- und Kapitalmarktrecht 362.

⁴⁵ Ibid.

⁴⁶ Maume, 'Die Verordnung über Märkte für Kryptowerte (MiCAR)' (2022) Recht Digital 461.

⁴⁷ Recital 6, Regulation (EU) 2023/1114.

The fact that the regulation also fails to provide clarity on the statute of limitation or contributory negligence might indicate that it is up to national legislation to supplement missing regulatory clarification, such as culpability.⁴⁸

Follow-on questions to the issue of culpability, would be the question of the burden of proof and the level of culpability required. Looking at PRIIP, one could adapt the presumption of fault with the possibility of exculpation of the responsible party.⁴⁹

The level of culpability is heavily disputed. Looking at other regulations and national legislations, one cannot deduce a clear rule book.⁵⁰

Losses

If the previous requirements are met the crypto-asset provider is liable for any loss incurred.⁵¹ The regulation does not provide any further explanation on the matter. Considering the choice of the word “loss” instead of “damage” one could argue for a narrow interpretation, that focuses on the loss that occurred due to price changes of the crypto-asset.⁵² This interpretation also makes sense when looking at the other European prospectus regulation. Commonly not included in the cost of any additional transaction cost or fee.⁵³

Another point that is not clearly ruled is the handling of contributory negligence and the impact on the loss calculation.

Conclusion

Despite being heavily influenced by the European prospectus regulation the whitepaper liability in Art. 15, 26, 52 MiCAR leaves lots of open questions. This leads to severe legal uncertainty, for both parties, which will have to be addressed by the courts, national or European legislation.

3.2.3 Art. 37 (10) MiCAR Losses in Reserve Assets

Under Art. 37 MiCAR issuers of ART have specific obligations regarding the custody of reserve assets. They must ensure that reserve assets are held securely, avoid concentration of the custodians and the reserve assets and accessibility for the issuer in order to guarantee a fast

⁴⁸ Buck-Heeb, 'Whitepaper-Haftung nach MiCAR' (2023) Zeitschrift für Bank und Kapitalmarktrecht 689.

⁴⁹ Article 11, Regulation (EU) No 1286/2014.

⁵⁰ Buck-Heeb, 'Whitepaper-Haftung nach MiCAR' (2023) Zeitschrift für Bank und Kapitalmarktrecht 689.

⁵¹ Art. 15(1), Regulation (EU) 2023/1114.

⁵² Buck-Heeb, 'Whitepaper-Haftung nach MiCAR' (2023) Zeitschrift für Bank und Kapitalmarktrecht 689.

⁵³ Ibid.

redemption process for the holder. The aim is to maintain stability and confidence in the value of these tokens, reduce risk to investors and ensure compliance with regulatory standards.

Art. 37 (10) MiCAR outlines the liability in the case of loss of the reserve assets.

The custodian is obliged to compensate or restitute the issuer of the ART with an asset of identical type or the corresponding value without undue delay.⁵⁴

For that several requirements must be met.

Parties

The parties that are addressed in Art. 37 (10) MiCAR is the custodian, which could be a credit institution, investment firm or CASPs, and the issuer of an ART. The term custodian is not legally defined in the MiCAR but can be understood as a service provider that holds financial, crypto- or other assets on behalf of a third party.

An issuer is according to Art. 3 (10) MiCAR a natural or legal person, or other undertaking, who issues Crypto-assets.

Liability subject

The liability subject must be a financial instrument or a Crypto-asset. Financial instruments are not specifically defined but include a basket of investment products such as bonds, stocks derivatives and commodities. Crypto-assets are legally defined in Art. 3 (1) (5) MiCAR and include digital representation of a value or of a right that is able to be transferred and stored electronically using distributed ledger technology or similar technology.

These assets must be held in accordance with Art. 37 (6) MiCAR, which describes the way different types of reserve assets must be custodied. If credit institutions custody funds they shall store them in an account opened in the credit institutions books.⁵⁵

In the case of financial instruments that can be held in custody, credit institutions or investment firms shall hold in custody all financial instruments that can be entered in an account for financial instruments opened in the books of the credit institutions or investment firms and all financial instruments that can be physically delivered to those credit institutions or investment firms.⁵⁶

Crypto-assets used as a reserve asset and held by my crypto-asset service providers must be held in the form of private cryptographic keys.⁵⁷ This leaves open how the private cryptographic

⁵⁴ Art. 37 (10) Regulation (EU) 2023/1114.

⁵⁵ Art. 37 (6) lit. a Regulation (EU) 2023/1114.

⁵⁶ Art. 37 (6) lit. b Regulation (EU) 2023/1114.

⁵⁷ Art. 37 (6) lit. c Regulation (EU) 2023/1114.

key is to be stored, which is problematic given the lack of industry standards and the exploit risks associated with different types of storage.

In the case of other assets, credit institutions shall verify the ownership of the issuers of the ART and keep records of the reserve assets for which they are satisfied that their owners are the issuers of the ART.⁵⁸

Breach of duty

The breach of duty is the loss of the reserve assets. It is not exactly defined what loss includes, but looking at the telos of reserve assets liability it can be assumed when the reserve assets are inaccessible by the custodian or issuer and thus cannot fulfill their purpose as reserve assets for the ART.

Exemption from liability

The liability does not require culpability of the custodian, but he may be exempted from liability if he proves that the loss occurred as a result of an external event beyond his reasonable control, the consequences of which were unavoidable despite all reasonable efforts to the contrary.⁵⁹

This is reasonable as the loss results out of the risk of using reserve assets and not merely out of the custody itself, which means that the liability should shift from the custodian to the issuer. To ensure a proper balance between the liabilities the exemption has high burdens for the custodian as he must prove force majeure, and the prove that the outcome would be unavoidable despite all reasonable efforts.

Reasonable efforts tend to be defined by industry standards and may include proper security measures against all expectable attack vectors. These safety measures could be different depending on the stored reserve asset.

Legal Consequence

If the custodian did lose reserve assets and could not prove force majeure, he is obliged to compensate or make restitution to the issuer of the ART with a financial instrument or a crypto-asset of an identical type or the corresponding value without undue delay.⁶⁰

⁵⁸ Art. 37 (6) lit. d Regulation (EU) 2023/1114.

⁵⁹ Art. 37 (10) Regulation (EU) 2023/1114.

⁶⁰ Art. 37 (10) Regulation (EU) 2023/1114.

Conclusion

Art. 37 (10) MiCAR provides legal certainty regarding the custody of the reserve assets for ART. This way, the user of ART is protected by the fact that the criteria for custody are regulated and the liability for losses of the reserve assets is clearly defined, which could lead the way for further adoption of ART.

3.2.4 Art. 39 MiCAR Right of Redemption

Art. 39 (1) MiCAR regulates the circumstances under which a holder of ART may exercise his right of redemption. The implementation and legal determination of such a mechanism is essential for the use and safety of ART.

Holders of ART shall at all times have the right to redeem their ART against the underlying reserve asset from the issuer if the latter fails to comply with the requirements set forth in Chapter 6. The obligations set out in Chapter 6 include the need to draw up and maintain a recovery plan, the purpose of which is to provide a management procedure in the event of non-compliance and the need to restore compliance.⁶¹

Chapter 6

This recovery plan must include appropriate conditions and procedures to ensure that remediation measures can be implemented quickly and must include a wide range of remediation options and further address the liquidity on redemption, limits of one the amount of the ART that can be redeemed in one working day and suspension of redemptions.⁶²

In addition, the issuer is required to notify the competent authority of the recovery plan within six months of the authorisation or approval of the crypto-asset white paper.⁶³

The recovery plan must be regularly reviewed and updated, leaving out what regular means.⁶⁴

The issuer also has to draw up and maintain and redemption plan for the redemption of ART against the reserve asset.⁶⁵ The plan has to show that the redemption process works without any economic harm to the holders of the ART and provide information on contractual agreements, procedures and systems and the designation of a temporary administrator with applicable law

⁶¹ Art. 46(1) Regulation (EU) 2023/1114.

⁶² Art. 46 (1) lit. a,b,c Regulation (EU) 2023/1114.

⁶³ Art.46 (2) Regulation (EU) 2023/1114.

⁶⁴ Ibid.

⁶⁵ Art. 47 (1) Regulation (EU) 2023/1114.

to ensure the that ART holder are paid in timely manner by the sales of the reserve assets.⁶⁶ It should also ensure the continuity of critical activities performed by the issuer or third parties.⁶⁷ The issuer must also notify the competent authority of the redemption plan within six months of the authorisation or approval of the crypto-asset white paper and review and update it on a regular basis.⁶⁸

Redemption procedure

The holder must request redemption. It is not clear whether there are any formal requirements for the request. It would be wise not to set high requirements for the redemption request, as this would make it more difficult for the holder, who may be an inexperienced player, to efficiently redeem the ART.

The redemption can be done by paying an equivalent amount in funds based on the market value of the asset referenced by the token or by redeeming the actual reserve asset that is referenced by the token.⁶⁹ According to that the issuer has the choice which kind of fund he provides the holder with. This choice is limited if the issuer accepts an official currency in exchange for the sale of the reserve asset. It must then redeem the asset in the official currency to the holder.⁷⁰

Besides that, the issuer must define the terms of redemption, the redemption mechanisms, the valuation principles, and the settlement conditions for the ART holder to ensure transparency. The holder should not have to pay a fee for the redemption of the ART.⁷¹

Conclusion

From the point of view of holder protection, Art. 39 MiCAR provides adequate and far-reaching protection.

The right of redemption is an important right that must be guaranteed to protect the holder and user of ART. In addition, the transparency and notification requirements help to build trust in ART, which may lead to further use. It remains to be seen whether these requirements can be met to a sufficient extent by issuers, in particular by small issuers.

⁶⁶ Ibid.

⁶⁷ Ibid.

⁶⁸ Art. 47 (3) Regulation (EU) 2023/1114.

⁶⁹ Art. 39 (2) Regulation (EU) 2023/1114.

⁷⁰ Ibid.

⁷¹ Art. 39 (3) Regulation (EU) 2023/1114.

3.2.5 Art. 75 (8) MiCAR Liability for the loss of Crypto-Assets

Art. 75 MiCAR defines the obligations that CASPs have towards their users. These include an agreement with the client that includes the identity of the parties, the nature and description of the service provided, the custody policy, the means of communication, the security measures, the fees, costs and charges, as well as the applicable law.⁷²

CASPs must maintain a client register, have a custody policy, provide client statements of positions, have a return procedure and store Crypto-assets separately from their own assets.⁷³

Art. 75 (8) MiCAR defines the liability of the CASPS towards their clients.

CASPs is legally defined in Art. 3 (1) (15) MiCAR as a legal person or other undertaking whose occupation or business is the provision of one or more crypto-asset services to clients on a professional basis, and that is allowed to provide crypto-asset services in accordance with Art 59 MiCAR. Clients is the nature or legal person that uses the service provided by the CASPs. The CASP must provide custody or administration of the Crypto-assets for the clients. This type of service is typically provided by crypto exchanges, where clients store their asset on the wallet of the crypto-exchange to facilitate trades.⁷⁴

The client is entitled for liability claim against the CASP, if the CASP loses the Crypto-assets itself or the means of access to them. The loss must be attributable to the CASP. This excludes the liability of the loss if it is attributable to the client or another CASP. The attributability is assumed as the CASP must prove that the loss occurred independently of the provision of the relevant service, or independently of the operations of the crypto-asset service provider, such as a problem inherent in the operation of the distributed ledger that the crypto-asset service provider does not control.⁷⁵

The liability is capped and is based on the market price at the time of the loss of the crypto-asset.⁷⁶

Not necessary is culpability of the CASPs for the loss of crypto-asset, which qualifies the Art. 75 (8) as a strict liability.

⁷² Art. 75 (1-7) Regulation (EU) 2023/1114.

⁷³ Ibid.

⁷⁴ Art. 75 (8) Regulation (EU) 2023/1114.

⁷⁵ Art. 75 (8) Regulation (EU) 2023/1114.

⁷⁶ Ibid.

3.2.6 Ownership

A private law concept that MiCAR introduces is the ownership of ART and C.⁷⁷

The concept of ownership of tokens may be problematic, especially when looking at jurisdictions that legally don't recognize the possibility of ownership of tokens. This is for example the case for Germany which does not categorize tokens as object⁷⁸ or Spain which merely categorizes tokens as intangible units of account in a distributed network.⁷⁹

The MiCAR leaves open how ownership of Crypto-assets can be established, transferred or abandoned.

4. TVTG

The TVTG, which stands for Token and VT-Dienstleister-Gesetz and came into force on 1 January 2020, is the world's first legal blockchain framework. It governs the civil law principles relating to tokens, the representation of rights by means of tokens and their transfer⁸⁰, as well as the supervision, rights and obligations of Trustworthy Technology service providers.⁸¹

The aim of the law is to ensure trust in digital legal communication, in the financial and economic sector and the protection of users in TT Systems⁸² and to create excellent, innovation-friendly and technology-neutral framework conditions for rendering services concerning TT Systems.⁸³

For Liechtenstein the openness of the government and authorities towards innovation and new technologies, together with an in-depth dialogue with practitioners, have proven their worth and led to an increase in FinTech companies.⁸⁴ The government recognised the potential of blockchain technology at an early stage, and established a working group for a possible blockchain law in 2016.

The motivation for this commitment was not only driven by the goal of increasing legal security for the citizens of Liechtenstein but also by the opportunity to be one of the first countries in the world to create a "token economy" and thus gain a competitive advantage over other

⁷⁷ Art. 70 (1) Regulation (EU) 2023/1114.

⁷⁸ §§ 903, 90 Bürgerliches Gesetzbuch.

⁷⁹ Tribunal Supremo [Spanish Supreme Court] STS 2109/2019 ECLI:ES:TS:2019:2109.

⁸⁰ Art. 1 (1) lit. a TVTG.

⁸¹ Art. 1 (1) lit. b TVTG.

⁸² Art. 1 (2) lit. a TVTG.

⁸³ Art. 1 (2) lit. b TVTG.

⁸⁴ BuA No. 54/2019 52.

jurisdictions.⁸⁵ Possible use cases that the government had in mind included financial services such as banks, funds, insurance companies and asset managers.⁸⁶

To achieve this goal, Liechtenstein used its efficient legislative procedure and considered 20 external expert opinions to ensure the practicability of the law.⁸⁷

4.1 Overview

The first chapter of the TVTG provides information on the general provisions. It defines the object and purpose of the law, as well as definitions of the terms used in the law.

Chapter two addresses the civil law bases of tokens and their disposal. In the following chapters the supervision of TT service providers is explained, this includes the registration, general provisions, the registration of TT service providers and the determination of the responsible supervision body.

4.2 Private Law Regulation

The TVTG governs different aspects of blockchain regulation. It is separated in private law provisions and, as pointed out above, general public law obligations of the TT service provider. The creation of new civil laws for tokens has been subject to discussions in the literature.

Some see it as a bold regulatory step and praise the technology neutrality that considers the unique features of the technology.⁸⁸ Others don't see the necessity for a new regulation, as it could be governed under traditional Liechtenstein property law.⁸⁹

The following paragraphs will highlight the new token definition and the TVTG's private law provisions.

4.2.1 Token

A token is defined as a piece of information on a TT System which can represent claims or rights of memberships against a person, rights to property or other absolute or relative rights; and is assigned to one or more TT Identifiers.⁹⁰

⁸⁵ BuA No. 54/2019 53.

⁸⁶ Ibid.

⁸⁷ Wild, 'Die zivilrechtlichen Grundlagen des TVTG' in Eckert, Schopper (ed), *Zivilrecht und Token-Ökonomie in Liechtenstein* (2020) 19.

⁸⁸ Wild, 'Token-Ökonomie im Fürstentum Liechtenstein: Zivilrechtliche Rahmenbedingung' in Hanzl, Pelzmann and Schragl (eds), *Handbuch Digitalisierung* (2021) 188.

⁸⁹ Rietzler/Frick/Casellini, 'Liechtensteinisches Blockchain-Gesetz' in Piska/Völkel (eds), *Blockchain Rules*, 17.21.

⁹⁰ Art. 2 (1) lit. c TVTG

This definition establishes the token as a new sui generis legal object in the Liechtenstein legal system.

Applying this definition the token itself a mere repository of information, where the content can be determined by the token itself, or by the referenced right. This way different all sorts of tokens are included, as the list of represented rights includes absolute and relative rights. This concept is also referred to as token container model as the TVTG and the legislative materials refer to the token as a sort of “container to represent rights”.⁹¹

Legislators have used this definition because it allows for a neutral technology-approach regulation that aims to provide legal certainty without interfering too much with the development of technology and leaving a wide range of functional use cases.

The definition consists of four key elements: information, TT-System, claims or rights, assigned by TT-identifier.

Information

Information in the sense of the TVTG refers to the digital, non-physical representation of data that has been processed and given specific meaning within a TT system.⁹² This information is integral to the operation and verification of tokens, whether they are system tokens such as Bitcoin and Ethereum, or custom tokens created through smart contracts. The flexibility of this definition allows it to include a wide variety of tokens and their respective information requirements, ensuring broad applicability within the legal framework provided by the TVTG.

TT-Systems

TT-Systems are legally in Art. 2 (1) lit b. TVTG. To understand the concept of TT-Systems it makes sense to look at the definition of trustworthy technology (TT) in Art. 2 (1) lit. a TVTG. TT stands for trustworthy technology and is legally defined in Art. 2 (1) lit. a TVTG as technologies through which the integrity of Tokens, the clear assignment of tokens to TT Identifiers and the disposal over tokens is ensured. Based on that definition the trustworthy technology requires the integrity of tokens, the clear assignment of tokens and the assurance of disposal over tokens.

Integrity can be understood as the accuracy and soundness of data.⁹³

⁹¹ Nägele, 'Tokenization Series, Episode 4' <https://tokencontainermodel.com/tokenization-series-episode-4-65ec6d8fff9f> accessed 17 June 2024.

⁹² Ibid.

⁹³ Nägele, 'Tokenization Series, Episode 5' <https://tokencontainermodel.com/tokenization-series-episode-5-847c13f1cebb> accessed 17 June 2024.

Next requirement is the clear assignment of tokens. How the clear assignment of tokens to TT-identifiers is ensured depends on the technical fundamentals of the TT. Bitcoin ensure this using the Unspent Transaction Output model (UTXO), while Ethereum uses the account-based model.

Finally, the tokens must be disposable by the owner, meaning the owner must be able to transfer them. This is typically the case if the owner has power over the private key.

Following this understanding TT-systems are, according to Art. 2 (1) lit. b TVTG, transaction systems which allow for the secure transfer and storage of tokens and the rendering of services based on this by means of trustworthy technology.

Claims or Rights

Next key element is the one of right or claim. To be noted is that Art. 2 (1) lit. c TVTG rules that a token can represent rights, which does not mean that it must. This leads to the conclusion that there are two types of tokens: those that represent rights and those that don't (such as Bitcoin, Ethereum).⁹⁴

With respect to tokens representing a right, the definition explicitly lists claim rights against a person, membership rights against a person, absolute property rights (property law in rem), relative property rights, other absolute rights and other relative rights. The fact of absolute or relative rights serves as a catch-all criterion in which the groups of claims or membership rights against a person and the rights to property can also be found.⁹⁵ This understanding is also enforced by the legal materials that the included rights shall refer to rights of all types.⁹⁶

Questionable is whether it is limited to transferable rights or whether also non-transferable rights are included. Following the telos of the TVTG and the explanations in the legal materials, one could argue that the possibility of the tokenization of non-transferable rights shall be possible, as long as the non-transferable character prevails.⁹⁷

TT-identifier

TT-identifier is an identifier that allows for the clear assignment of tokens.⁹⁸ In technical terms, this refers to the so-called public key, which is a cryptographically generated code that serves

⁹⁴ Wild, 'Begriffsbestimmung und Bezeichnungen im TVTG' in Schopper (ed), Zivilrecht und Token-Ökonomie in Liechtenstein (2020) 31.

⁹⁵ Wild, 'Token-Ökonomie im Fürstentum Liechtenstein: Zivilrechtliche Rahmenbedingung' in Hanzl, Pelzmann and Schragl (eds), Handbuch Digitalisierung (2021) 191.

⁹⁶ BuA No. 54/2019 60.

⁹⁷ Wild, 'Token-Ökonomie im Fürstentum Liechtenstein: Zivilrechtliche Rahmenbedingung' in Hanzl, Pelzmann and Schragl (eds), Handbuch Digitalisierung (2021) 191.

⁹⁸ Art. 2 (1) lit. d TVTG.

as a public address for assigning and sending tokens. It can be thought of as an IBAN that is stored in a public registry that shows the funds held at the address and can be verified by every party.

4.2.2 Art. 5 TVTG Power of Disposal and Right of Disposal

Art. 5 TVTG is about the property law relations and is structured in three paragraphs. The lawmakers introduced a new property law regulations and refrained from using existing property law for cryptocurrency regulation. The provisions are influenced by familiar property law dogmatics, while at the same time introducing new legal concepts that give rise to new questions.⁹⁹

Paragraph 1 states that the owner of the TT-Key has the power of disposal over the token.¹⁰⁰ TT-Key is legally defined in Art. 2 (1) lit. e TVTG as a key that allows for disposal over Tokens. The common technical term for that is Private Key. Power of disposal must be distinguished from right of disposal. Paragraph 2 states the assumption that the one with the power of disposal (the owner of the TT-Key), also has the right of disposal.¹⁰¹ This assumption is extended to past owners of the TT-Key.¹⁰² This presumption may be rebutted if, for example, ownership of the TT-Key has been acquired in an unlawful manner, or another party that has access to the TT-Key acts against internal contractual obligations. Paragraph 2 also has impact on the burden of proof regarding the right of disposal. The disposer without the power of disposal must prove that he has the right of disposal.

This system follows the common practical understanding in the crypto economy, which is that the owner of the private key also has the right to transfer it and is also connected closely to the common property concepts of ownership and possession. The similarity is no coincidence, as the legal material shows that the legislators followed these concepts closely.¹⁰³ The aim was to implement an independent set of legal rules, which allows a more technology neutral approach, and to create a functional equivalent.¹⁰⁴

The power of disposition is the functional equivalent of the concept of ownership, and the right of disposition is the functional equivalent of the concept of property. This parallel helps to

⁹⁹ Wild, 'Die zivilrechtlichen Grundlagen des TVTG' in Eckert, Schopper (ed), Zivilrecht und Token-Ökonomie in Liechtenstein (2020) 47.

¹⁰⁰ Art. 5 (1) TVTG

¹⁰¹ Art. 5 (2) TVTG

¹⁰² Art. 5 (2) S. 2 TVTG:

¹⁰³ BuA No. 54/2019 185.

¹⁰⁴ Wild, 'Die zivilrechtlichen Grundlagen des TVTG' in Eckert, Schopper (ed), Zivilrecht und Token-Ökonomie in Liechtenstein (2020) 50.

understand the new concepts of power and right of disposal, as they are not legally defined in the TVTG.

Paragraph 3 rules that the bona fide recipient of a token, can assume that the person with the power of disposal (owner of the TT-Key), is also the person authorised to dispose. This provision is also closely linked to the concepts of property law and aims to ensure effective legal communication and to protect the bona fide recipient.

4.2.3 Art. 6 TVTG Disposal of Tokens

Art. 6 TVTG outlines the procedures and requirements for transferring rights associated with tokens. Paragraph 1 defines the concept of disposal and deals with two different cases of disposal. The first one defines disposal as the transfer of the right or disposal of the token.¹⁰⁵

This can be done in two ways. It is possible to transfer the right to dispose of the token to the acquirer by transferring it to a different, public TT identifier over which the acquirer has the right to dispose. The right to dispose of the token is thus transferred by assigning the token to the acquirer's TT identifier. This approach utilizes the TT-system.

Another possibility to dispose is by transferring the TT-Key to the recipient. This can be done by using a so-called hardware or paper wallet. In this case, the transfer of the TT key, embodied in a physical object, is governed by the provisions of property law. As this is a physical object, the mode must be fulfilled by a form of transfer. If the physical object is transferred in the form of a hardware or paper wallet as a tangible object with legal effect, the authorisation to dispose of the token is transferred by changing the person who has the TT key.¹⁰⁶

The other way the token can be disposed is by the justification of a securities or a right of usufruct to a token.¹⁰⁷ The term security should be understood to mean not only the creation of a lien, but also the creation of full legal security such as the transfer of ownership by way of security or the retention of title.¹⁰⁸

Disposal of tokens

The second paragraph governs the disposal of tokens and defines three cumulative requirements for the effective disposal. The first requirement addresses the transfer of tokens and the establishment of a security or usufructuary right to a token.¹⁰⁹

¹⁰⁵ Art. 6 (1) lit. a TVTG.

¹⁰⁶ Wild, 'Die zivilrechtlichen Grundlagen des TVTG' in Schopper (ed), Zivilrecht und Token-Ökonomie in Liechtenstein (2020) 52.

¹⁰⁷ Art. 6 (1) lit. b TVTG.

¹⁰⁸ BuA No. 54/2019 190.

¹⁰⁹ Art. 6 (2) lit. a TVTG.

The transfer of the tokens requires that the transfer of the token is concluded in line with the regulations of the TT-System.¹¹⁰ This provision results in a flexible and technology-neutral requirement that is determined by the TT-System used. The lawmakers followed this approach to prevent that the regulation quickly becomes obsolete or proves to be an obstacle to future technological development.¹¹¹ The TVTG and legal materials do not explain what is meant with the conclusion of a transfer. Following the understanding of the technology neutral approach of the TVTG the term conclusion could be determined by the TT-System. Mostly these TT-System require confirmations of nodes to conclude a transaction and thus make it irreversible.

A limited right in rem to a token can be ordered without transfer, if this is apparent to third parties and the time of the order is clearly established.¹¹² The provision requires no special formal requirements for the ordering of a limited right in rem.

Technically this would require some sort of mark on the TT-System which makes it apparent to third parties. Yet it is not clear how this might be implemented in the future, but this leaves room for innovation and future development. The provision also leaves open the question of how clear the order needs to be, who exactly can be considered a third party and what standard of care applies to a third party, i.e. whether they have certain rights or obligations to inspect and verify.¹¹³

The second requirement for the disposal is the unanimous declaration of the transferring and recipient party that they are transferring the right of disposal to the Token or that they wish to justify a restricted in rem right.¹¹⁴ In terms of property law, this requirement is the disposal transaction as an agreement in rem that is intended to have a direct effect on an existing right by transferring, cancelling or restricting it.¹¹⁵ The agreement does not need to fulfil any formal requirements and can also be concluded by implied actions.¹¹⁶

The final requirement is that the transferring party is in possession of the right of disposal.¹¹⁷ This is another reflection of the common property law concept that only the authorized owner shall be allowed to effectively transfer property. The missing right of disposal may be healed if the recipient is in good faith (Art. 9 TVTG).

¹¹⁰ Ibid.

¹¹¹ BuA No. 54/2019 190.

¹¹² Art. 6 (2) lit. a TVG.

¹¹³ Wild, 'Die zivilrechtlichen Grundlagen des TVTG' in Schopper (ed), *Zivilrecht und Token-Ökonomie in Liechtenstein* (2020) 57.

¹¹⁴ Art. 6 (2) lit. b TVTG.

¹¹⁵ Wild, 'Token-Ökonomie im Fürstentum Liechtenstein: Zivilrechtliche Rahmenbedingung' in Hanzl, Pelzmann and Schragl (eds), *Handbuch Digitalisierung* (2021) 195.

¹¹⁶ BuA No. 54/2019 191.

¹¹⁷ Art. 6 (2) lit. b TVTG.

In conclusion, the requirements of Art. 6 (2) TVTG can be summarised in such a way that lit. a leg cit provides for requirements regarding the implementation of the mode of disposal of a token, lit b leg cit traces the disposal transaction in terms of property law without reference to a title transaction and lit c leg cit states a general property law maxim.¹¹⁸

Art. 6 (3) TVTG governs the reversal of wrongful transfers and explains that if a token is disposed over without reason or a subsequent reason fails to exist, the revocation shall be accomplished in accordance with the provisions of the Enrichment Law. This provision is surprising as it, according to the legal material, introduces the Abstraction Principle (Abstraktionsprinzip) to the Liechtenstein property law.¹¹⁹ Historically the Liechtenstein property law always followed the causal system of transfer principle, which states that for a transfer of ownership or any other property rights to be valid, the underlying transaction must be valid.¹²⁰ If the underlying transaction is void or voidable, the transfer of property rights fails.¹²¹

The principle of abstraction is a fundamental concept in German civil law which separates the legal agreements involved in the transfer of property rights into two distinct transactions: the underlying obligation and the disposition.¹²² These two transactions are isolated and have no legal effect on each other. The disposition does not fail if the underlying obligation is void. Consequence of a transfer without an effective underlying obligation is, is an Enrichment Law claim. This is the same concept that Art. 6 (3) TVTG is implementing. The legal materials state in regard to Art. 6 (3) TVTG that if the token is disposed of without legal grounds or if it subsequently ceases to exist, a claim for restitution under the law of enrichment arises ex nunc and no claim for vindication of the token.¹²³

The introduction of the principle of abstraction has led to discussions. The argument for the shift is that the principle of abstraction fits the technical nature of TT-Systems, as transactions are mostly irreversible.¹²⁴ Another reason for the implementation of the principle of abstraction is the legal nature of the token. A token is not a thing within the meaning of property law. Although the TVTG does create legal positions that are adequate in terms of property law in

¹¹⁸ Wild, 'Die zivilrechtlichen Grundlagen des TVTG' in Schopper (ed), *Zivilrecht und Token-Ökonomie in Liechtenstein* (2020) 58.

¹¹⁹ BuA No. 54/2019 191.

¹²⁰ Opilio, 'Liechtensteinisches Sachenrecht Arbeitskommentar' I-34.

¹²¹ Ferrari, 'Vom Abstraktionsprinzip und Konsensualprinzip zum Traditionsprinzip' (1993) *Zeitschrift für europäisches Privatrecht* 52.

¹²² Ibid.

¹²³ BuA No. 54/2019 191.

¹²⁴ BuA No. 54/2019 191.

the form of power of disposal (possession) and authorisation to dispose (ownership), this does not turn a token into a thing.¹²⁵ It would therefore have been inconsistent not to categorise a token as a thing, but to be able to vindicate it by means of an action for the return of a movable thing from the property.¹²⁶

Arguments against the implementation of the principle of abstraction have been that it is alien to the Liechtenstein legal system.¹²⁷ Others argue that it is unnecessary to introduce a new principle, since the principle of causation would also lead to claims under the law of unjust enrichment in the event of the failure of vindicative claims.¹²⁸

Furthermore, critics argue that it is technically possible to implement termination mechanisms in smart contracts to ensure the enforcement of legitimate claims.¹²⁹

Finally, there could be practical issues arising from the nature of blockchain technology and transfers of assets. Often, parties interact on a pseudonymous basis and therefore contract formation, which requires consensus on the *essentialia negotii*, might not be possible.

The implementation of this principle would contradict the unique features of blockchain technology which promises easy and trustless peer-to-peer transactions.¹³⁰ What is uncertain is whether, and how, acceptance of a contract can be created in the context of a blockchain transfer.¹³¹ Technically, the recipient does not need to take any action as they simply receive tokens in their wallet and do not need to take any further action. Problems could also arise from the permissionless access of blockchains, as parties could be legally incapacitated and interact with others without being exposed.¹³² As a result, the contract would be void and the transaction would have to be revoked, which again would contradict the core selling points of blockchain technology. The solution to this could be to require blockchain verification of users to prove capacity to contract, comparable to a know-your-customer process. This compromise would also severely compromise the core idea of permissionless and free financial access that DeFi proponents value. How these fundamental conflicts will be resolved is up to the practitioners and remains to be seen.

¹²⁵ Wild, 'Die zivilrechtlichen Grundlagen des TVTG' in Schopper (ed), *Zivilrecht und Token-Ökonomie in Liechtenstein* (2020) 61.

¹²⁶ Ibid.

¹²⁷ BuA No. 54/2019 194.

¹²⁸ Wild, 'Die zivilrechtlichen Grundlagen des TVTG' in Schopper (ed), *Zivilrecht und Token-Ökonomie in Liechtenstein* (2020) 61.

¹²⁹ BuA No. 54/2019 194.

¹³⁰ Email from Lehmann to Pirlich (19.06.2024).

¹³¹ Ibid.

¹³² Ibid.

4.2.4 Art.7 TVTG Effects of Disposal

Art. 7 TVTG is one of the key provisions of the civil law provisions, as it governs the relationship between the token and the in the token represented right. Therefore, the provision only applies to tokens that represent a right according to Art 2 (1) lit. c TVTG.

The article contains three paragraphs. The first paragraph serves as *lex generalis* and concerns the relationship between a token and the right it represents, while the second paragraph, as a *lex specialis*, addresses a more specific case. The third paragraph regulates the enforcement procedure with regard to the disposal of tokens.

Art. 7 (1) TVTG rules that the disposal over the token results in the disposal over the right represented by the token. This provision states that generally, if a token is disposed (according to Art. 6 TVTG) then the represented right is being disposed with it. This leads a synchronisation of token and right disposal. To be noted is the fact that this does only refer to the cases where the legal effects come into force by law.¹³³

The legal effects of Art. 7 (1) TVTG only occur in one case, namely the applicability of § 81a SchlT PGR. Art. 7 (1) TVTG can currently only be applied if a right represented by a token is affected, which constitutes an uncertificated security within the meaning of § 81a SchlT PGR. This means that there is no paradigm shift in property law associated with the applicability of Art. 7 (1) TVTG. Instead, the interaction must be examined on a case-by-case basis, in particular with regard to whether a token represents a right that does not constitute an uncertificated security. If the right in question does not constitute an uncertificated security, the applicability of Art. 7 (2) TVTG must be considered as a special rule.¹³⁴

This understanding is not uncontroversial, since § 81a (4) SchlT PGR refers to the TVTG, but it is not explicitly stated whether Art. 7 (1) TVTG or Art. 7 (2) TVTG. To understand the implications of this question, it is useful to look at Art. 7 (2) TVTG.

Art. 7 (2) TVTG rules that if the legal effect under (1) does not come into force by law then the person obliged as a result of the disposal over the token must ensure, through suitable measures, that (a) the disposal over a token directly or indirectly results in the disposal over the represented right, and (b) a competing disposal over the represented right is excluded.¹³⁵ The provision creates a two level model that ensures a link between the analogue and digital worlds, even if

¹³³ Art. 7 (2) TVTG.

¹³⁴ Wild, 'Token-Ökonomie im Fürstentum Liechtenstein: Zivilrechtliche Rahmenbedingung' in Hanzl, Pelzmann and Schragl (eds), *Handbuch Digitalisierung* (2021) 196.

¹³⁵ Art. 7 (2) TVTG.

the right is not transferred by force of law.¹³⁶ The levels have to be seen isolated. The first level is the question of the transfer of the token, which is governed by the special property law of the TVTG, the second level is the question of the right represented, which is governed by general civil law and may have special rules depending on the right.¹³⁷

In comparison to Art. 7 (1) TVTG there are more legal requirements to fulfill.

Returning to the question of § 81a (4) SchlT PGR, it is now clear why the question of reference is so important. Depending on the interpretation of the provision, the practical implications change, and the transfer of book-entry securities may follow the one-step or two-step model. The interpretation of the reference to Art. 7 (2) TVTG is supported by the argument of legal certainty. The two-level model increases legal certainty because it requires two separate transactions, one analog and one digital.

In favour of the interpretation of a reference to Art. 7 (1) TVTG is the aim of the legislator to promote the marketability of securities.¹³⁸ In addition, this approach increases efficiency while allowing innovation in the financial economy. The two-level model would create unnecessary barriers for market participants and would negate all the benefits of using VT-Systems.

4.2.5 Art. 8 Legitimation and Exemption

Art. 8 TVTG deals with the question of legitimisation and exemption. Legitimation regulates the question of who an obligor may and must recognise as authorised.¹³⁹ This is an essential standard for legal transactions, as it determines to whom the debtor must perform.

Paragraph 1 defines the person possessing the right of disposal reported by the TVTG as the lawful holder of the right represented in the token in respect to the obligor. The lawmakers clarified that the obligor is to be understood as any debtor who can make debt-discharging payments to the person authorised to dispose of the token.¹⁴⁰

Paragraph 2 governs the discharge of obligations through payment against the person who has the power of disposal as reported by the TT system.¹⁴¹ The obligor is not withdrawn from his obligation if he knew, or should have known with due care, that he is not the lawful owner of the right.¹⁴²

¹³⁶ Wild, 'Token-Ökonomie im Fürstentum Liechtenstein: Zivilrechtliche Rahmenbedingung' in Hanzl, Pelzmann and Schragl (eds), *Handbuch Digitalisierung* (2021) 191.

¹³⁷ BuA No. 54/2019 171.

¹³⁸ Ibid.

¹³⁹ BuA No. 54/2019 206.

¹⁴⁰ Ibid.

¹⁴¹ Art. 8 (2) TVTG.

¹⁴² Ibid.

Initially, this provision referred only to claims and membership rights, but it has since been extended to cover all rights.¹⁴³ Some argue this application goes too far and the scope of Art. 8 TVTG has to be reduced and must be limited to uncertificated securities in accordance with § 81a SchlT PGR. If the token represents an uncertificated security, Art. 8 TVTG and § 81a (6) SchlT PGR complement each other. The debtor is only obliged to make payment to the creditor entered in the uncertificated securities ledger. Art. 8 TVTG safeguards the obligor by recognising the person authorised to dispose of the token as identified by the TT-System as the legal owner of the right represented in the token.

If the token does not represent an uncertificated security, Art. 8 TVTG does not fit. For example, if a property right is represented in a token, Art. 8 TVTG would overlay the legal relationships of the analog world. Such an overlay is neither intended nor legally justifiable, as Article 7 (2) TVTG requires appropriate measures if the right represented does not "automatically follow". Moreover, the result of the interpretation that a right represented in a token can be enforced without the token would lead to disruptions of legal transactions in both the analog and the digital world. Debtors would have to regularly check whether their counterparty is entitled to the rights, which would lead to legal uncertainty. In addition, there is no safeguard to ensure that the authorised party is in fact the owner of the right and can transfer it. In the case of a transaction, the law provides certainty as to the effect of the exemption, but no protection as to whether the assignee is actually the owner of the right.¹⁴⁴

The legal materials contain no information on how to resolve this discrepancy between the digital and analogue worlds. The extension to all types of rights speaks against a teleological reduction of the norm and in favor of an extensive application.

It remains to be seen whether and how this criticism will be addressed and how courts will deal with this problem.

4.2.6 Art. 9 TVTG Acquisition in Good Faith

Art. 9 TVTG protects recipients who receive tokens in good faith and without charge, aiming to acquire disposal rights or restricted in rem rights, even if the transferor lacked the entitlement to dispose of the tokens.¹⁴⁵

This is a common property law provision that aims to ensure the trust in legal transactions.

The transfer must be received in good faith and free of charge.

¹⁴³ BuA No. 54/201 206.

¹⁴⁴ Wild, 'Die zivilrechtlichen Grundlagen des TVTG' in Schopper (ed), Zivilrecht und Token-Ökonomie in Liechtenstein (2020) 74.

¹⁴⁵ Art. 9 TVTG.

The transfer is free of charge if the transferee has entered an equivalent counter-transaction with the transferor. Gifts or the finding of a private key are not subject to this protection.¹⁴⁶ In addition, the token must be transferred, which is the case if the requirements of Art. 6 (2) a and b TVTG are met.

The provisions focus solely on the token and not on the right associated with the token. This means that good faith acquisition in the digital world follows the system of the TVTG, while good faith acquisition in the analog world is governed by general civil law. This also results in a distinction between two levels, which can lead to a discrepancy between the digital and analogue world. Because of the different requirements for good faith acquisition, the token could be acquired without the associated right being transferred with it.¹⁴⁷

This divergence is not possible in regard to uncertificated securities as § 81a (5) SchlT PGR rules that a person who acquires uncertificated securities or rights to uncertificated securities in good faith from a person entered in the book of uncertificated securities is protected in his good faith acquisition, even if the seller was not authorised to dispose of the uncertificated securities. As a result, the token itself is acquired according to Art. 9 TVTG and the contained right follows the according to § 81a (5) SchlT PGR. This approach is appropriate as one of the main benefits of TT-Systems is the verifiability of assets by external parties.

4.2.7 Art. 9a TVTG Claim for Damages

Art. 9a TVTG was not contained in the first version of the TVTG and was added in the year 2024 to state that the tokenisation service provider not only has a warranty obligation under supervisory law for the legal and technical requirements for the effective representation and transfer of rights by tokens vis-à-vis third parties, but that it is also liable for this under civil law - by way of compensation for damages.¹⁴⁸

According to Art. 9a TVTG anyone who suffers damage using a token because it does not meet the legal or technical requirements for the effective representation and transfer of rights by tokens vis-à-vis third parties can demand compensation from the tokenisation service provider who put this token into circulation. The tokenisation service provider is responsible if it does not prove that it had ensured the necessary legal and technical requirements for the effective representation and transfer of rights by tokens vis-à-vis third parties. The provision can be structured into the constituent elements of party, token, breach of duty and damage.

¹⁴⁶ BuA No. 54/2019 209.

¹⁴⁷ Wild, 'Die zivilrechtlichen Grundlagen des TVTG' in Schopper (ed), Zivilrecht und Token-Ökonomie in Liechtenstein (2020) 77.

¹⁴⁸ BuA No 73/2023 75.

The parties of Art. 9a includes the user as the claimant on the one side and the service provider as the debtor on the other side. The term of user is defined in Art. 2 (1) lit. f TVTG as people who dispose over Tokens and/or use the TT Services. Service provider is defined in Art. 2 (1) lit. m TVTG as a person who places tokens in circulation for clients and ensures the legal and technical requirements for the effective representation and transfer of rights by tokens vis-à-vis third parties. The legal materials state that a direct contractual relationship between the injured party and the tokenisation service provider is not necessary.¹⁴⁹

The object in question should be a token. Art.9a makes no further specifications, which is why one can assume a broad understanding of token.

The service provider is in breach of duty if the token does not meet the legal or technical requirements for the effective representation and transfer of rights by tokens vis-à-vis third parties. The second sentence of Art. 9a TVTG regulates the presumption of a breach of duty. This provision privileges the user, as it is difficult to prove the lack of legal or technical requirements for external users. This understanding was also recognised by the legislator.¹⁵⁰

Finally, the breach of duty must result in causal damage. The legal materials state that to be able to rely on Art. 9a TVTG, the damage must have been caused by the legal or technical defects. As the tokenisation service provider that puts tokens into circulation generally has no influence on the content of tokens, it is not responsible for the content.¹⁵¹

Art. 9a (2) TVTG extends the liability to physical validators. Physical validators are defined in Art. 2 (1) lit. p as a person who ensures the enforcement of rights in accordance with the agreement, in terms of property law, represented in tokens on TT systems. In this case, the breach of duty is fulfilled if the enforcement of rights to property represented in the token is not guaranteed, placing the burden of proof on the side of the physical validator. Art. 9a (2) TVTG serves as a *lex specialis* regarding property rights.

4.2.8 Art. 10 TVTG Cancellation of Tokens

Suppose a TT-Key is unaccounted for or a token is non-functional. In that case, the person who had the right of disposal at the time of loss or non-functioning of the token may apply for cancellation of the token in a non-contentious procedure. In that case, the applicant must convince the court of their right of disposal and the loss of the TT-Key or the non-functionality of the token. The respondent is the person obliged by the right represented in the token. To guarantee legal security and trust, the declaration of non-functionality shall be published

¹⁴⁹ BuA No 73/2023 75.

¹⁵⁰ Ibid.

¹⁵¹ Ibid.

without delay in the Official Journal and at the discretion of the District Court in any other appropriate manner.

The respondent in the case of cancellation is the person obliged from the right represented in the token. The claimant can also assert their right without the Token upon cancellation or demand the generation of a new Token at their own expense.

4.2.9 Art. 35 TVTG Liability

Art. 35 TVTG is a prospect liability provision that sanctions incorrect information of basis information. The legal materials state that the provision is modeled by Art. 38 WPPG.¹⁵²

The liability of the token issuer requires incorrect, incomplete, or missing basis information. Liable is whoever is responsible for the information, according to Art. 33 (3) and (4) TVTG. This may also include vicarious agents and persons they employ if they fail to prove that they took due care according to the circumstances in their selection, instruction, and supervision.¹⁵³ In the case of multiple persons being liable, Art. 36 TVTG rules that they shall be held jointly and severally liable.

The breach of duty is presumed, as it would be unreasonable to leave that upon the acquirer of the tokens. The token issuer can exclude himself from liability if he is able to prove that he took the due care of a prudent businessman when preparing the basic information.¹⁵⁴ This possibility aims to acknowledge the extra layers of complexity of TT-Systems and the difficulty to review them for technical issues.¹⁵⁵

The occurred damage must be causal due to the breach of duty from the token issuer. The TVTG does not rule whether the proof of burden is on the buyer's side or if it is presumed. It would be reasonable to implement a presumption of causality if the buyer acquired the tokens in a certain time window after the wrongful information was released, like the concept of investment sentiment (Anlagestimmung).¹⁵⁶

Damage only includes direct losses and no loss of profit.¹⁵⁷ Courts may decide freely over the damage, as there is no limit cap.¹⁵⁸

¹⁵² BuA No. 54/2019 280.

¹⁵³ Art. 35 (2) TVTG.

¹⁵⁴ Art. 35 (1) TVTG

¹⁵⁵ BuA No. 54/2019 281.

¹⁵⁶ Hoffmann, 'Kausalitätserfordernis und „positive Anlagestimmung“ bei der Haftung für fehlerhafte Kapitalmarktinformation' (2011) 7 Gesellschaftsrecht Abhandlungen 5.

¹⁵⁷ Stadler/Falke, 'Verbraucherrechtliche Aspekte' in Piska/Völkel (eds), Blockchain Rules (2024) 425.

¹⁵⁸ BuA No. 54/2019 281.

Token issuers are not allowed to exclude in advance to the detriment of users in the event of intent or gross negligence.¹⁵⁹

The limitation period for liability is governed by Art. 38 TVTG and is one year from the date on which the cause of action arises, the cause of action arising from the date on which the injured party becomes aware of both the damage and the identity of the party liable for the damage and expires ten years from the date of the harmful act.

The obligation to publish basic information does not apply in the case that the recipient parties demonstrably declare that they waive the basic information before acquiring the token, the offer is geared towards fewer than 150 users, or the sale price of the total issue does not exceed 5 million Francs or the corresponding equivalent in another currency.¹⁶⁰

4.3 Conclusion on TVTG

The TVTG provides a broad private law framework that introduces the tokenisation of assets into the Liechtenstein financial economy. The legislator introduced new property law terminology and combined it with old theory to address Crypto-assets' specificities. While this leads to further complexity and the two-tier system of analog and digital worlds, it also enables the possibility of different use cases for TT-systems. In particular, the interlocking of the token economy and uncertificated securities creates various new use cases in the transfer and trading of uncertificated securities.

It remains to be seen how the existing legal question will be resolved in practice and whether Liechtenstein's pioneering role in regulation will contribute to the successful development of a token economy.

5. Comparing MiCAR with TVTG

To understand the nature of private law in both MiCAR and TVTG, it is essential to compare their specific provisions. This comparative analysis will reveal the degree of compatibility between the two regulatory frameworks and assess whether integrating the private law concepts from TVTG could enhance the effectiveness and comprehensiveness of MiCAR. By examining these aspects, we can determine the potential benefits and challenges of supplementing MiCAR with elements from TVTG, ultimately aiming to achieve a more robust legal structure for the regulation of Crypto-assets.

¹⁵⁹ Art. 35 (3) TVTG.

¹⁶⁰ Art. 31 (1) lit. c TVTG.

5.1 Goals and purposes of MiCAR and TVTG

Although the TVTG was implemented earlier than MiCAR and could have been used as a model law for the European regulatory process, it is clear that the structure and results are quite different.

Both jurisdictions sought to implement a framework that promoted technology, protected investors, and regulated the market. The outcome of both laws shows that there was a very different emphasis on the objectives. While MiCAR emphasises detailed and comprehensive regulation of crypto companies, the TVTG provides a broad and general framework that leaves room for companies to operate.

Examples of the different approaches are the implementation of the crypto categories of MiCAR and their detailed regulations compared to the token definition of the TVTG or the other requirements regarding the information in the whitepapers.

The Liechtenstein approach of creating a technology-neutral law that provides economic actors with sufficient legal certainty to ensure economic activity without restricting the scope of action too many contrasts with the detailed regulatory framework of the EU, which places high demands on crypto companies.

5.2 Similar Provisions

Despite their different approaches to regulatory issues, both MiCAR and TVTG have adopted similar mechanisms to protect users of Crypto-assets. These similarities are particularly apparent when looking at the definitions of Crypto-assets or tokens and the rules influenced by prospectus liability in relation to issuers' information obligations.

Crypto-Assets vs Token

MiCAR and TVTG both use different terminology to describe digital assets. The determining factor for both concepts is the information represented by the token or crypto-asset and not the act of tokenisation.¹⁶¹ Therefore, the token container model can be found in both frameworks. MiCAR categorises Crypto-assets and creates different sets of rules depending on the category. The TVTG creates a single set of rules for tokens and does not perform this categorisation. In principle, the TVTG approach is more open as it applies to NFTs and financial instruments such as security tokens. The European legislation explicitly excludes NFTs from the scope of

¹⁶¹ Nägele, 'MiCA — Markets in Crypto-assets Regulation and the DLT Pilot Regime — What impact might these proposed EU regulations have on Liechtenstein and the TVTG (aka Blockchain Act)?' <https://tokencontainermodel.com/mica-markets-in-crypto-assets-mica-and-dlt-pilot-regime-what-impacts-do-these-proposed-eu-fc3b85609dca>, accessed 17 June 2024.

MiCAR.¹⁶² In addition, financial instruments are not subject to MiCAR but fall within the scope of the Markets in Financial Instruments Directive II.¹⁶³ In conclusion, both concepts are derived from the same idea, but are shaped differently as a result of different trade-offs.

Whitepaper liability and basic information liability

Both the MiCAR and the TVTG provide for liability for incorrect information influenced by prospectus liability. MiCAR uses the widely known technical term "white paper," while TVTG introduces the term "basic information."

The liability of the MiCAR is regulated separately for Crypto-assets, ART and EMT, while the TVTG provides a liability provision for tokens as a result of its unified token concept.

Looking at the parties involved, one can see that MiCAR includes the terms "offeror" and "holder". The TVTG uses the terms "token issuer" and "user". The terminology is different, but the MiCAR and TVTG definitions of token issuer and offeror are both determined by the fact of the public offering of Crypto-assets, which makes them interchangeable.

Holders are not defined in the MiCAR, whereas the TVTG defines users as persons who hold tokens and/or use the TT services.¹⁶⁴ Following the definition of the TVTG one can assume that the terms of user and holder are equal, since even holding of Crypto-assets is a utilisation of the TT-Service.

MiCAR extends the liability not just to the legal person of the offeror but also to the members of its administrative, management or supervisory body.¹⁶⁵ In comparison the TVTG does only address the in the basic information named responsible persons.¹⁶⁶ In that regard the MiCAR is more specific and has a wider scope, as the holder has more parties to demand losses from.

Examining the requirements for token providers regarding the publishment of information one can conclude that both frameworks require information on the provider, risk, technology, and rights, while MiCAR extends the information requirements to environmental impact and trading platform information. Furthermore, according to Art. 6 MiCAR the white paper must contain standardised phrases and additional warnings.¹⁶⁷ The basic information provision in the TVTG is more concise and less detailed.

¹⁶² Article 2 (3), Regulation (EU) 2023/1114.

¹⁶³ Art. 2 (4) lit. a Regulation (EU) 2023/1114.

¹⁶⁴ Art. 2 (1) lit. f TVTG.

¹⁶⁵ Art. 15 (1) Regulation (EU) 2023/1114.

¹⁶⁶ Art. 35 (1) TVTG.

¹⁶⁷ Art. 6 (3), (5) Regulation (EU) 2023/1114.

In terms of breach of duty, both provisions require the information to be incomplete. In addition, the TVTG supplements the provision with the criteria for correction.¹⁶⁸ Again, MiCAR goes further than the TVTG by also requiring fair, clear, and non-misleading information.¹⁶⁹

The need of culpability for white paper liability has been discussed in the literature, as presented in chapter 3.2.2, but is not explicitly ruled in Art. 6 MiCAR. The TVTG governs the possibility of exculpation if the token issuer provides proof that the responsible persons took the due care of a prudent businessman when preparing the basic information.¹⁷⁰

The basic information liability of the TVTG only refers to direct damages that occurred due to incorrect or incomplete information and no loss of profit. The MiCAR speaks of any losses instead of damage and does not provide any further clarification. While losses can be interpreted narrowly, in comparison to damage, it is yet to be seen in legal practice how the concept of losses about white paper liability is being applied.¹⁷¹

The TVTG also provides regulation on the matter of severability of damages¹⁷² and the liability of vicarious agents or employees.¹⁷³

Comparing the two provisions, one can conclude that despite using different terminology, the basic structure is similar. The MiCAR whitepaper liability favors the holder as it requires higher and more information standards from the token offeror, has no culpability, and offers more counterparties. The TVTG is less demanding in that, it does not require as much information to be provided and leaves open the possibility of exculpation of the token issuer.

Liability

The question of liability is regulated in MiCAR with regard to liability for the loss of reserve assets in Art. 37 (10) MiCAR and with regard to liability for the loss of Crypto-assets in Art. 75 (8) MiCAR. By comparison, the TVTG does not provide for such differentiated liability, as it does not categorise tokens. This results in a general indemnification provision in Art. 9a TVTG, which provides for a claim for damages by the user against the tokenisation service provider if the legal or technical requirements for effective representation vis-à-vis third parties are not met. This claim is extended in Art. 9a (2) TVTG with regard to the physical validator

¹⁶⁸ Art. 35 (1) TVTG.

¹⁶⁹ Art. 15 (1) Regulation (EU) 2023/1114.

¹⁷⁰ Art. 35 (1) TVTG.

¹⁷¹ Chapter 3.2.2

¹⁷² Art. 36 TVTG.

¹⁷³ Art. 35 (1) TVTG.

in the event that the contractual enforcement of rights to property represented in the token is not guaranteed. Differences in the provisions are, for example, the damage cap in Art. 75 (8) MiCAR at the market value of the crypto-asset that was lost at the time the loss occurred. The Art. 9a TVTG has not such a damage liability limitation.

To protect customers of custodians the TVTG provides clear internal control mechanisms for TT-Custodians such as the introduction of appropriate security measures, in particular to prevent the loss or misuse of TT keys¹⁷⁴ or the minimum-security capital of 100 000 CHF.¹⁷⁵

Looking at the different provisions, one can see that they all presume fault on the part of the crypto-asset provider and give him the opportunity to exculpate himself if he can prove that the damage was caused by external events. With regard to the exculpation in Art. 37 (10) MiCAR, the CASP must prove that the events were unavoidable despite all reasonable efforts, whereas in Art. 9a TVTG, the tokenisation service provider must prove that it has fulfilled all the requirements for legal and technical representation vis-à-vis third parties.

In general, the provision of the TVTG allows for more flexibility, as it does not refer to a specific type of token and only implements a general clause. This is at the expense of legal certainty, as it leaves open what exactly can be understood as technical or legal requirements. MiCAR's approach to liability is very precise, as it addresses specific scenarios, which increases legal certainty for CASPs and users, but also limits the scope of application, which could be to the detriment of the user.

5.3 Complementary Provisions of the TVTG

Despite being a shorter legal framework, the TVTG also deals with legal issues and matters that are not covered by MiCAR and may therefore be particularly attractive as a possible legal supplementation

Property Law

Outstanding are the property law provisions of the TVTG regarding disposal, its effect, and cancellation. The MiCAR provides no information on the property law relations in regard to Crypto-assets, as it primarily focuses on the protection of users by regulating the crypto institutions and implementing user protection provisions such as liability claims. Since the

¹⁷⁴ Art. 17 (1) lit. d TVTG.

¹⁷⁵ Art. 16 (1) lit. b TVTG.

MiCAR provides no answer to the property law relations, the TVTG does not interfere with MiCAR in that regard and might be a suitable role model for property law regulation.

5.4 Unique Provisions of MiCAR

The EU's approach follows a different structure as it introduces token categories and different regulatory regimes for them. While the TVTG often does not address specific regulatory questions, probably because of its technology-neutral approach, the MiCAR has very specific rules to ensure the legal security of Users.

Art. 13 MiCAR Right of Withdrawal

A major difference in the consumer protection provided by the two laws is that MiCAR adopts the concepts of the Consumer Rights Directive and allows retail holders the right to withdraw. Compared to the TVTG, MiCAR goes further in terms of consumer protection, as the TVTG does not offer the possibility for token purchasers to exercise their right of withdrawal. The Liechtenstein route puts less pressure on crypto companies as they don't have to deal with special withdrawal requests from their customers, which can be a critical aspect for smaller startup-type businesses. The question of whether the general civil law right of withdrawal applies to the purchase of tokens in Liechtenstein will have to be addressed. In this respect, the EU Regulation provides a clear framework.

Art. 39 MiCAR Right of Redemption

For similar reasons, the redemption right of ART holders is also explicitly regulated in the TVTG. It is still possible to close this gap by implementing it individually in the contractual agreements between the holder and the CASP, but as it is not a mandatory provision in the regulatory framework, this must not be done and leads to a generally lower level of security for users of ART.

Supervisory Regulation

A notable focus of MiCAR is the regulation of crypto companies such as CASPs and issuers. The regulation not only addresses the necessary requirements that companies have to fulfill but also provides them with clear guidelines regarding the drafting of contracts with their customers.¹⁷⁶ In contrast, the TVTG does not significantly interfere with the private law autonomy of crypto companies and leaves them more freedom. The TVTG protects the

¹⁷⁶ Art. 30, Art 31 Regulation (EU) 2023/1114.

customer through general private law provisions such as Art. 9a TVTG. The result of this approach is greater flexibility and less bureaucracy for companies, which could encourage the creation of new companies and business models.

6. Possible supplementation of MiCAR with TVTG as a Model?

As outlined above, there are similarities, differences, and overall opportunities for private law rules in both frameworks. Supplementing MiCAR with the private law provisions of the TVTG would have an impact on various aspects of the EU Regulation.

Comparing the two prospectus liability regimes, it is clear that the MiCAR whitepaper obligations and liability provide greater protection to the purchaser of Crypto-assets, as the token issuer has to fulfill higher information obligations. Depending on the perspective, it makes more or less sense to supplement the prospectus duties and liability aspect with the basic information duties of the TVTG. Based on the concept of supplementation and consumer protection, it does not make sense to consider implementing the TVTG provision, as the EU regulation is more comprehensive. The Liechtenstein government's approach is more market-liberal, as it imposes fewer information requirements and thus less bureaucracy on companies. This different approach also stems from political convictions and is in clear contrast to MiCAR.

Looking at the protection of users, it can be concluded that the rights of users of Crypto-assets are more specific in the MiCAR, especially when it comes to specific types of tokens such as ART. Nevertheless, the general provision of Art. 9a TVTG could be a suitable complement to cover any liability gaps that might result from the precise EU regulation. In this way, it could serve as a *lex generalis* compared to the *lex specialis* rules, such as the liability of reserve assets or the liability of custodians of Crypto-assets.

The most outstanding difference is the property law regulation of the TVTG. The MiCAR does not address any of the property law relations that arise from the use of crypto assets.

The approach of the TVTG to introduce new property law terms and connect them to common property law rules might be a fitting approach for EU legislation, as the new terminology helps to avoid unnecessary debates about national understanding of already used terminology.

One of the key questions that was also heavily debated in Liechtenstein was the question of disposal and the connected property law principle. The TVTG implemented the German Law Abstraction Principle, while the national property law legislation utilises the Causal System of Title Transfer. This approach might interfere with national property law understanding,

especially since the Abstraction Principle is not widely used in the EU. On the other hand, the impact of this question is limited because the TVTG only introduces new property law regarding the transfer of tokens, leaving the question of the transfer of the ancillary rights to the common property law. Adopting this approach for the EU would result in a harmonised framework for the transfer of the token but a diffuse framework for the secondary level of the attached right. This is not a problem where the token does not represent a real world right, but it is a problem for tokens that derive their value from associated rights such as ART.

The complexity resulting from the combination of the two-tier model and the different EU property regimes could be an obstacle for the crypto-economy, especially as the aim is to transfer rights seamlessly and efficiently across borders.

The TVTG introduces the new concept of "power of disposition", providing a new definition of ownership that could be implemented in MiCAR, as this concept is referenced but not fully defined or clarified.

The future development and interaction between the MiCAR and TVTG will be interesting as the MiCAR will be integrated into the Agreement of the Economic Area. This will allow Liechtenstein companies to passport to other countries and might trigger more European regulatory competition. Also, due to the supremacy of EU law, national provisions that collide with EU provisions are subsidiary, which means that MiCAR takes precedence in the event of a collision with the TVTG. This won't affect many of the TVTG's private law provisions, as only a few collide.

7. Conclusion

Despite having different regulatory emphases, the two regulations derive from a similar basic understanding of consumer protection and due diligence duties of the economic participants.

Clearly, the TVTG leaves a lot of regulatory room for future developments, which helps to retain the necessary flexibility to be a hub for novel financial technology. In contrast, the MiCAR focuses on a solid and detailed framework for CASP, Custodians, and Issuers and tries to achieve a balance between proper user protection and the freedom of action of the market participants.

In conclusion, it can be said that MiCAR primarily focuses on regulatory provisions. Provisions of private law are only governed in a few isolated and abstract cases. The member states are responsible for the specific provisions and organisation of private law.

The TVTG's private law provisions can be incorporated into the MiCAR, resulting in a harmonised crypto-asset property law. For that, the member states must be willing to implement such a framework and waive the possibility of governing their own national crypto private law. The entry into force of MiCAR will show how companies react to the different frameworks and what role the more far-reaching private law regulation will play for crypto companies. The reaction of the market and the future establishment of companies will show to what extent the MiCAR is competitive and whether the regulation needs to be supplemented or even amended.

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