Special thanks to the leading contributors to this report, for your thorough research and work:

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Thanks to the community for contribution and inspiration:

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Table of contents

1. [**Executive Summary**](#_vus3sqnojf75) **4**
2. [**Introduction**](#_g7fjzxfl8mbb) **5**
3. [**Blockchain: Economic value and perspective**](#_7b71f89ofvmr) **6**

3.1 [The Blockchain: An Evolution In Social Technology](#_d6hnj98t3lx) 6

[3.2 Smart Contracts - A Path To Efficiency Without Trust](#_p7ndg4dguo5k) 11

[3.3 Cryptocurrencies – Features & Functions](#_1pgyfcbe36zz) 16

[3.4 Cryptotokens - Novel Technology & Economic Models](#_3dy6vkm) 18

[3.4.1 The technological component](#_onunhpz115de) 18

[3.4.2 The non-required social component](#_t7xzx3q1q85a) 18

1. [**Should cryptocurrencies and cryptotokens be treated as a separate asset class?**](#_kj4cseqidssv) **20**

4.1 [**Legal Considerations**](#_1s86sbmjubdm) **20**

[4.1.1 Types of Tokens](#_lxqilldmcnj9) 21

[4.1.2 Legal Implications](#_ilt1b4wyy27r) 23

4.2 [AML regulations (ICO vs. ITO)](#_y549a3crk3s4) 24

[4.2.1 Carte blanche of tokens regulation](#_6ed3fmjczhtv) 25

[4.2.2 AML regulations are important in the context of blockchain 26](#_2d6etqj5pbm1)

[4.2.3 Applying AML regulations to tokens](#_a4nuzad276y3) 26

[4.2.4 New framework](#_t9x9cqnrdkt2) 27

4.3 [Securities Law](#_gnkh4i6yumlx) 28

4.4 [Other relevant regulations](#_ouy51hyrdf74) 30

[4.4.1 Payment Services](#_ju2c9yqysovh) 30

[4.4.2 E-Money](#_5h7t48swagdy) 31

[4.5 Data Protection](#_lnxbz9) 32

[4.5.1 Personal Data in Blockchain](#_f2s4gwrt5vjx) 32

[4.5.2 Right to Erasure (Rights to be Forgotten)](#_gyimv9d68uvp) 33

[4.5.3 Legal Use of Data within the Blockchain](#_rl19fjeao270) 36

1. [**European VAT regulations**](#_t96m27mby8fd) **38**

5.1 [Status quo](#_35nkun2) 38

[5.2 VAT exemption for all kinds of cryptocurrencies / cryptotokens](#_44sinio) 39

1. [**Approaches to Blockchain in different Jurisdictions**](#_kh6o13204597) **41**

6.1 [Proposals and approaches taken in the United States](#_2jxsxqh) 41

6.1.1 [Cryptocurrency](#_bdxeybs5iq0p) 42

6.1.2 [Cryptotoken – Securities Regulatory Panorama](#_k83763sabq8d) 46

6.1.3 [Delaware Blockchain Initiative](#_f1q8ehl31pr) 47

6.1.4 [Other Developments](#_l3eg02gtbnss) 49

6.1.5 [What could be learnt from the U.S. experience?](#_l3sgiltupzmo) 50

6.2 [Practical experience with regulations in member states (EU)](#_2xcytpi) 52

1. [**Conclusion**](#_is477322becy) **53**
2. [**Writers and contributors**](#_5ie1jl77hy72) **53**
3. [**Appendix**](#_3whwml4) **55**

[9.1 Questionnaire Poland](#_dpo6umzh1dww) 55

[9.2 Questionnaire Germany](#_x19wfrfszru3) 55

[9.3 Questionnaire Estonia](#_5p5bnfwoizvn) 59

[9.4 Questionnaire France](#_gkioa4cgug5w) 64

[9.5 Questionnaire Malta](#_8ie1ed4h5f50) 66

[9.6 Questionnaire Switzerland](#_bt1n3lnunsm) 69

[9.7 Questionnaire UK](#_4f2n2ryr09qr) 70

# Executive Summary

This report summarizes the existing situation with respect to blockchain regulations and proposes a legislative approach serving the interests of businesses, investors, and regular citizens. Its purpose is to help reduce, or indeed completely eliminate, the problem of regulatory uncertainty facing all interested and affected parties.

We begin by discussing the nature and dynamics of core blockchain-related technologies, the effects they have on economic processes, and how we might understand common interactions in light of these technical innovations. Next, we survey existing regulations and offer a view of how cryptocurrencies and cryptotokens fit with them, leading us to recommend they be treated as a separate asset class without becoming subject to European VAT regulation. We continue with an overview of approaches to blockchain that other jurisdictions take and extract key lessons to for European regulators to consider. We conclude with a call to action asking the same to work speedily with the relevant parties to establish a simple, yet robust regulatory framework.

# Introduction

In recent weeks, due to a large number of successful funding rounds for a variety of companies and buy-in from some of the largest tech companies & financial institutions in the world, public and private sector interest in the blockchain industry has increased dramatically. However, without regulation in place to reassure and protect investors and the public, the space risks producing a bubble of dotcom proportions as network effects produce self-reinforcing interest detached from actual productive value. In order to capture and protect the real benefits of this novel technology for the European Single Market, the authors recommend swift action; certain countries and states outside the European Union are already benefiting by providing funding and regulatory clarity (e.g. Dubai’s Blockchain Strategy[[1]](#footnote-0)), while others suffer from talent flight due to high barriers (e.g. New York’s BitLicense[[2]](#footnote-1)). Indeed, Swiss canton Zug serves as an example of successful collaboration between government, financial service providers, as well as associations, businesses, and other political bodies.

In the same spirit, a variety of businesses and individuals from the blockchain- and crypto-community, venture capital companies, investors, and legal firms, have started a European Regulatory Initiative and produced a report recommending steps to be taken. This report shall be seen as a collective voice expressing community support for the establishment of a sensible regulatory framework.

Due to continuing development in the technology and yet to be established standards, this text cannot provide a comprehensive and final account of all the issues surrounding it. As we show below, blockchain and its related innovations have far broader implications than simply further upgrading the financial industry, making the provision of legal certainty an even more pressing issue.

# Blockchain: Economic value and perspective

## The Blockchain: An Evolution In Social Technology

On 6th of June, the combined market capitalization of all cryptocurrencies and cryptotokens surpassed the $100bln threshold[[3]](#footnote-2). While this – compared to the overall estimated $13-15 trn size of the financial services industry[[4]](#footnote-3) – is still miniscule, it indicates a sustained trend of growth for the technology itself and the overall industry, regardless of the inevitable failings of individual market participants. The underlying technology making all of this possible is, of course, the blockchain: a shared, trusted, public ledger of transactions, that everyone can inspect but which no single user controls[[5]](#footnote-4).

The concept of the blockchain itself first entered the public sphere with the birth of the Bitcoin protocol in 2009. As a decentralized financial system, this novel technology enabled pseudonymous users to store and transact value in the form of bitcoins, the platform’s native units. These transaction can be without central parties in the middle and settle within a few minutes, with an extremely high degree of security.For the first few years, all focus remained on the cryptocurrency aspect, and understandably so. The global financial system had just experienced a meltdown of historic proportions, leading a small but desperate diaspora of people from all over the world to look elsewhere for storing their assets and facilitating private and business transactions. But after its inception in the Bitcoin protocol, and after a period of experimentation with companies trying to shoehorn applications on top of it, the technology and overall field has moved past the initial design of Bitcoin.

Ethereum, a blockchain 2.0 platform(protocol?) launched in 2014, goes beyond virtual currency. It takes the same technology, embedding an entire coding language inside it which is enforced by the Ethereum Virtual Machine (EVM) This enables developers to build applications using so-called “smart contracts” – in essence, a new form of digitalized legal relationships *(see 3.2 for more on smart contracts)*. This innovation, existing on top of the foundational consensus layer, introduced the concept of tokens into the blockchain space *(see 3.4 for more on cryptotokens)*. Since Ethereum’s launch, and using the token model it provides primarily as a funding mechanism, the space has seen even more innovation, both on the technology side and the use of novel business models (e.g. token economies). We are seeing more and more innovation around blockchain protocols, for example the Tezos platform[[6]](#footnote-5), which innovates both on the protocol level and (more interestingly) on the governance mechanisms, there is now even talk of yet another “next generation” of blockchain. With so many blockchains emerging servicing different needs and purposes, it is only logical that eventually that will be “one blockchain” that connects them all - which could also be thought of as “the internet of blockchains”. Protocols like Polkadot and Cosmos explore this idea in depth.

Because of this divergence in the space, companies use the term “distributed ledger technology” (short “DLT”) to denote this broader space of distributed databases, including but not limited to “blockchain”.

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| *“Similar to how AI has evolved into an umbrella term for a set of ideas, methods, and technologies, the label "blockchain" will become a label for a field, encompassing many goals and many technologies, typically related to benefits brought by decentralization, immutability, and assets / tokens.”*  *~* Trent McConaghy, CTO at BigchainDB |

The use cases for this technology have expanded as well: previously only reserved for the Fintech industry, it now enables a plethora of digital services, e.g. identity management, legal and notarial services, voting and governance systems, real estate management, authentication of valuables, internet of things, smart grids, content publishing, and many more[[7]](#footnote-6). In essence, the rapidly developing technologies under the label “blockchain” are poised to become a new layer on top of the internet – a substrate upon which a whole ecosystem of opportunity organically grows.

Similar to the internet, blockchain is an innovation in shared protocols[[8]](#footnote-7). The internet uses foundational protocols like TCP/IP (device communication), HTTP (hypertext), and SMTP (email) as a substrate, upon which then companies like Facebook, Google, and others build powerful applications capturing the majority of value that the substrate enables. In the blockchain application stack the relationship between protocols and applications, so far, has been reversed: value concentrates at the shared protocol layer and only a fraction of that value is distributed along the application layer – making them so called “fat protocols”[[9]](#footnote-8). The underlying innovation making this possible are these so called tokens: digital objects that can securely hold custom data and thus represent all kinds of “real world objects” (and relationships) like equity, real estate, identity – anything really *(see 2.4 for more on tokens)*. For this reason, so called “tokenization” promises to capture ever greater shares of existing offline & online markets and business processes, promising greater efficiency, security, and transparency.

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| *“Tokenization of the equity financing could be a major breakthrough in a capital market industry that has not seen any major change over the last 30 years, ever since the move from the open-out-cry / pit trading model to electronic trading.”*  *~* Jean-Michel Pailhon, Ledger |

Already jurisdictions across the world are starting to realize both economic and legal potential of blockchain technology for private and public sector use. Dubai has committed to putting all its legal documents on the blockchain by 2020[[10]](#footnote-9). Delaware, home to over 80% of US company registrations (including over 60 % of Fortune 500 companies), has partnered with blockchain company Symbiont in an effort to transfer its company register (among other things) to a custom-built blockchain[[11]](#footnote-10), thereby signaling to the rest of the world that in the future shares will transform into tokens. Estonia, already a leader in digital governance, is working with a number of companies to transfer medical records[[12]](#footnote-11), governmental records[[13]](#footnote-12), notary services[[14]](#footnote-13), banking infrastructure[[15]](#footnote-14), and even e-voting systems[[16]](#footnote-15) to blockchain.

It is becoming increasingly apparent that this technology, while currently in the public eye largely due to its use as an effective funding mechanism and seen only as such, will instead become the backbone of a more secure, efficient Internet. Because of its central innovations (blockchain, cryptocurrency, token, and smart contract), it is poised to become the foundation of the “internet of value”[[17]](#footnote-16), “internet of rules”[[18]](#footnote-17), and “internet of agreements”[[19]](#footnote-18).

At a recent meeting in the European Parliament on this topic, blockchain expert Vinay Gupta asked his audience to imagine that *“the future is a foreign country and it is our largest trading partner”[[20]](#footnote-19)*. If we accept this conceptualization for a moment, then we might be well advised to initiate open discussion with corporate representatives and citizen stakeholders, craft coherent and mutually beneficial trade policy, as well as create the necessary infrastructure to receive this strange country’s prized wares. Specifically, and analogous to trading with normal countries, regulation that focuses on consumer protection by establishing a legal framework while leaving technical development of infrastructure open to experimentation, is likely to create economic prosperity without stifling innovation.

In the remaining sections of 3, we will dive deeper into the definitions and technical details that characterize these core technologies.

## 3.2 Smart Contracts - A Path To Efficiency Without Trust

The efficiency of a market is – among others – defined by low or even the absence of transaction costs, transparency and symmetrically distributed information. Today and for decades, contracts underlying market transactions fall short of such requirements. Costs related to negotiating, documenting and in particular enforcing contracts make transaction inefficient at marginal cost level. Smart contracts aim to substantially reduce such costs enabling transactions that otherwise would not be performed.

Lawyers understand a contract as the agreement of two or more parties regarding a certain topic. It requires a consenting view of the parties involved concerning certain facts, as for example the ownership of certain assets, properties and/or rights and the mutual understanding of very general matters including the pretended implicitness in which units time elapses. More obvious it provides for certain obligations, entitlements and liabilities of the parties and allocates responsibilities and risks.

Entering into a contract always results in transaction costs. There are preparation costs, costs related to bargaining and negotiating and documenting. Not as obvious are costs each party needs to internalize in trusting in the other party's performance and compliance. Such cost should not be underestimated. As simple example shows its significance:

A Buyer enters into an agreement with a random person at the street corner that he/she would sell you a brand-new luxury car at the price of EUR 10,000. Further assume that the Buyer is required to make a down payment of half of the purchase price to the Seller. In those circumstances the Buyer’s cost of trust is as high as the down payment he makes. This comes as the likelihood that the random Seller will (i) not be able to deliver the luxury car (which is usually sold for ten times that much) for that price is almost zero and (ii) take the money and run with leaving the Buyer at zero chance to get any recourse is very high.

Probably, applying certain common sense nobody would enter into such an agreement for many reasons, but the principle still applies regardless who are the contracting parties. If the trust in business and contracting parties erodes the whole economy gets endangered. One of the more recent examples was the banking crisis in 2008/2009 when banks stopped lending each other monies, almost halting the circulation of cash.

Even if there is sufficient and justified trust in the other parties’ ability to perform contractual obligations the risk of post-contractual or even undiscovered pre-contractual disagreement remains and is substantial. Lawsuits about contract matters by far dominate the workload of civil courts. Parties get into disputes about the kind or quality of their respective performances, the scope of their obligations and the fulfillment or non-fulfillment of conditions contractual performances are subject to.

Until recent transactions seek to overcome such flaws through various mechanisms as escrow agents or pre-appointed experts testifying of certain facts or even determining legal matters. What was the structure of choice for decades, is in essence the replacement of one shortcoming by the other. Trust in the contracting party is replaced by trust in the escrow agent or expert.

Smart contracts attempt to make transactions trust free. They are computer protocols that are verifying and enforce the performance of a contract. Smart contracts are self-governing and self-performing and through this makes any trust in any contracting party unnecessary. Smart contracts have already been defined in 1994 by Nick Szabo, a researcher and computer scientist at the University of Washington as:

*A smart contract is a computerized transaction protocol that executes the terms of a contract. The general objectives are to satisfy common contractual conditions (such as payment terms, liens, confidentiality, and even enforcement), minimize exceptions both malicious and accidental, and minimize the need for trusted intermediaries. Related economic goals include lowering fraud loss, arbitrations and enforcement costs, and other transaction costs.*

The practical example is simple: Two parties enter into a smart contract about the licensing of certain content. The moment the licensee pays the royalty the license is granted. Outside a smart-contract world the parties would have to trust each other, the licensor in payment of the licensee, the licensee in the licensor being the rightholder. A smart contract enforces this trust free. Once entered the algorithm will only transfer the license to the licensor if being able to transfer funds to the licensee at the same moment, which it will only do so, if the license can be validly granted.

The smart contract reduces costs related to trust to a minimum which is the effort related to testing the algorithm. Once this is performed no further trust related costs occur. In standardized transactions these costs will not affect marginal costs at all. Further, since the smart contract is an automated computer protocol human error is non-relevant, while transparency in the “reading” of the contract is high as any outcome based on any possible variation of input can – at least theoretically – be tested with binary results.

Through this smart contracts enhance transaction certainty, eliminate legal uncertainties and through this reduce transaction costs substantially.

However, smart contracts are not for everything and everyone. They show certain downsides which in turn again increase transaction costs. In general they are made for mass transactions that follows certain patterns. Only then the saving in cost on trust in the counterparty exceeds the costs of creating (programming) and testing the smart contract. Further, since the smart contract is a computer algorithm any possible input and outcome need to be known when setting up the contract. Although, there might be mechanisms to overcome gaps in the agreement if they have been identified in principle while programming, there is until today apparently no solution for the “unknown unknowns”, which are gaps in the agreement nobody has thought of when creating the smart contract. Yet, “unknown unknowns” are widely common in traditional contract law and usually resolved through rulings of the courts following the general principles and underlying concepts of the agreement that has been challenged.

Considering this, smart contracts bring and will bring higher efficiency to market transactions. It does so through enhancing the catalogue of existing legal “tools” to effect transactions, without destroying them. Courts, judges and experts remain of significance to bridge contractual gaps. Traditional agreements maintain their right of existence for individual transactions or when conditions are not binary, but rather provides for a certain element of discretion. However, in transactions executed and performed in high numbers, in which conditions can either true or false and ideally electronically verified smart contracts take away the marginal cost that have hindered transactions until today. Further, smart contracts can do much more than just enhancing efficiency in civil law transactions. On their basis structures can be built and created that function completely self-organizing and autonomous without human interference. The most known examples are DAOs. DAO stands for “Decentralised Autonomous Organisation” and means a smart contract or rather a set of smart contracts that acts on the basis of certain information input according to decisions based on algorithms. THE DAO – as a project name - achieved some popularity when created similar to a fund attracting the equivalent of a seven digits Euro amount to be invested into blockchain project. THE DAO was set that governed by smart contracts the “investors” could in accordance with a certain governance (=voting) structure decide in which projects and to which extent the pledged funds are to be invested. However, contrary to a classical fund, THE DAO did not have any central management and through this was immune against biased decisions and principal agent dilemmas. Once developed further connected smart contracts may reflect the entire complex structure of a corporation as today known as a limited liability company or further resulting in entities free of centralized management, but completely governed by its stakeholders with smart contracts assuming the executing role.

Today, DAOs are difficult to assess or describe legally. A structure that has no centralized management either does not exist or would put all stakeholders in the position and under the responsibility of an executive director or manager. The law also has no applicable guidelines in case that there are underlying vulnerabilities in the smart contracts and they act differently than was intended. The law in its current form would face substantial difficulties assessing how to deal with a smart contract which causes unfortunate circumstances which were not intended . As THE DAO has demonstrated that entity-like structures on the basis of interdependent smart contracts is technically possible and attracts thousands of “user” or contracting parties, the law is required to move on and develop a concept to cover this phenomenon. As with any new technology, standards are not applicable, this would require the acknowledgement of a complete new type of “entity”.

## 3.3 Cryptocurrencies – Features & Functions

The idea of digital or virtual currencies is not a new one. However, before the advent of blockchain based systems, they all failed due to a variety of reasons[[21]](#footnote-20):

* the unavoidable reliance on a trusted central authority that could abuse that trust,
* the ability of rogue parties to copy digital information and thus effectively counterfeit the digital “coins” (the “double spend problem”), and
* the intervention of regulatory authorities and other agencies working to prevent the above scenarios.

Bitcoin was the first protocol to solve the double spend problem through cryptography (making it a cryptocurrency), decentralize the issuance and protocol authority, and thus introduce for the first time a true virtual currency into the digital sphere. Since then, thousands of cryptocurrencies (or “tokens”, “altcoins”, “protocol tokens”) have sprung up since creation has become very easy and cheap. But what exactly is a cryptocurrency and what functions does it fulfil?

According to Arthur Brock, noted software engineer and currency designer, there are five key properties of cryptocurrencies[[22]](#footnote-21):

1. *Digital*: holdings are electronic and only exist and operate by virtue of a group’s agreement about how to interpret digital bits according to rules about operation and accounting of the currency.
2. *“Trustless”*: the currency operates independent of the goodwill, integrity, practices, or decisions of any particular (non-representative / unaccountable) group or authority.
3. *Decentralized*: access, issuance, transaction accounting, rules & policies, are collectively visible, known, and held.
4. *Cryptographic*: leverages cryptographic data structures (hash-chains, Merkle trees, etc) to ensure [Intrinsic Data Integrity](http://www.artbrock.com/blog/footprints-flow). This cryptographic structure is used to enable a variety of people to host the data without being able to alter it.
5. *Identity*: some kind of identity and authorization infrastructure is required (even if it permits anonymous use) to associate the bits with some kind of account, wallet, owner, or agent who can use them. This is typically implemented using cryptographic public/private key pairs.

The primary functions of a cryptocurrency then, ostensibly, are storing and transferring value, thereby distinguishing it from cryptotokens which have a much broader range of functions. As such, a cryptocurrency enables its holders to participate in markets and other economic structures that make use of them. Depending on their design they may have a deflationary or inflationary monetary policy, provide privacy or not, and differ among a number of other properties. While they do fit the popular definition of money as a medium of exchange, store of value, and unit of account, they do not fit the current legal definition *(for more on this, and how cryptocurrencies fit with existing and novel regulations, see 4.4 - 5.2)*.

## 3.4 Cryptotokens - Novel Technology & Economic Models

When media outlets refers to blockchain, they usually talk about tokens. Bitcoins and Ethers are the most prominent and well known tokens, but in fact there are more than 500 other tokens monitored on coincap.io. A token is a complex structure which has technological and legal layers, but contrary to most off-chain assets does not necessarily require an underlying social agreement.

### 3.4.1 The technological component

First of all, a token is a technological concept. It is an entry on a ledger (a blockchain). A user may own that token, whereas strictly speaking the user owns a key[[23]](#footnote-22) that allows him to assign the ownership of that token to a different user through creating a further entry in the ledger (the blockchain). Through this, tokens themselves are a very basic application on the actual blockchain that otherwise would only document a series of transactions. With the token and the assignment and transferability of its ownership the token opens the door for a legally and socially relevant function of the blockchain instead of a mere technical tool.

### 3.4.2 The non-required social component

The token grants its owner a certain right depending on the purpose of the related blockchain or content of a smart contract, e.g. the one that manages distribution and allocation of the token. This could simply be the permission to make use of that specific blockchain. This is the case when tokens are needed as “gas”. In order to complete a certain transaction on a blockchain a certain amount of tokens needs to be “paid”. It might also be that the token represents a certain asset that the token holder may use or assign through “showing” the token or transferring it. In both cases the token works as a certificate of that certain right or asset.

However, contrary to certificates representing rights or assets in the off-chain world a token not necessarily requires an underlying social agreement. All rules that govern such token and define related rights are expressed in computer code which serves as a set of deterministic rules.

Off-chain a certificate that for example represents shares in a company or the ownership of a certain asset are only efficient, if it has a social context. It requires in a certain community or social environment their acknowledgement as representation of ownership or right. The moment the members of that community or social environment stop acknowledging the relation between the certificate and the related right or asset the certificates become worthless and the system collapses. Social communities attempt to avoid any such collapse by manifesting that acknowledgment in their governing law. However, it still requires the trust and the faith that at least a sufficient majority of community members obey such law.

This does not necessarily hold with regard to tokens on a blockchain. Since the token is the key to trigger and complete a certain transaction on the blockchain it is a pure technical process that does not require trust or faith. If the token allows its owner to make use of a blockchain, hence complete a certain transaction this works if the software of the blockchain permits it. An acknowledgment of a social community and its members is not required.

However, this might be different in situations where tokens represent off-chain assets or rights. Here, tokens are not much different from traditional certificates and require the social acknowledgment of their representational function.

# Should cryptocurrencies and cryptotokens be treated as a separate asset class?

# Legal Considerations

In a pure technical on-chain environment the requirement for legal context to a token is limited. If the token is the key for completing a transaction on blockchain it becomes technically self-regulated. The software triggered by the token simply completes the transaction. Since in practice no human interference is possible a non-compliance is strictly speaking also not possible. However, exceptions apply.

A legal framework will always be required when tokens relate to off-chain assets or rights. In these situations the law needs to permit the representation of such assets and rights through a blockchain token and needs to acknowledge that ownership in rights or assets follows ownership in the token representing that asset or right.

Considering the above a token represents a certain asset or right. If this is a pure on-chain asset or right, a token is efficient without any underlying social and/or legal agreement. Tokens also might represent off-chain assets or right, but then require legal framework and social agreement to become effective. It cannot be underestimated that with tokens on blockchain for the first time ever a representation of rights and assets has been created that would be efficient without legal and social environment. This might lead to emergence of a parallel on-chain reality, independent from the off-chain world. Although practical use cases today might look limited, options and opportunities already become indefinite, for example if blockchain is combined with IoT-technology.

### 4.1.1 Types of Tokens

Tokens materialize in different types. Today four categories can be identified, with the potential of more emerging in the future.

Intrinsic Tokens

One type of token is completely intrinsic. It only represents rights or assets on blockchain. These might be tokens that allow the use of a certain blockchain, hence the key to complete a transaction on that specific blockchain. Prominent examples are bitcoin or ethereum tokens. Such tokens often come into existence through a process called “mining”, but other solutions are also possible. . Another example are tokens which are necessary to make use of various protocols built using blockchain technology. Such protocols are coded on blockchain, with rules enforced by the blockchain, and govern possible uses of their tokens.

Asset-backed Tokens

Further there are tokens that represent assets from the off-chain world. In principle there is no limitation. Tokens could represent any form and type of hardware, from gold to fiat currency or real estate properties and intellectual properties in any form of content. As stated above with regard to asset-backed tokens an agreement both on legal and social level is required to validate such tokens. Only if the law and the community acknowledge the ownership in such assets those tokens can become effective.

Rights related Tokensi

Similar to asset-backed tokens these tokens represent certain rights that are not tied to material assets. The most prominent example are equity tokens that are supposed to represent shares or interest in companies and entities. As asset backed tokens rights related tokens require legal and social acknowledgement. They are different though, as they are built on two layers of trust. Whereas asset-backed tokens directly relate to the underlying asset, rights related tokens only represent the ownership in a certain right that itself is related to an asset when honored by the social environment.

Currency

All such tokens can become a currency as the most prominent example bitcoin. Although, bitcoin in principle is made to make use of a certain blockchain it has detached itself from this function and became a payment instrument. A token can intentionally be created to assume such function, but it cannot fulfill that purpose without social acknowledgment. Only if the social environment to a sufficient extent accepts that token as a payment instrument and trusts that if received as such it can re-use it for payment, the token becomes a currency. From the economics’ standpoint, any currency should fulfill three fundamental functions of money: medium of exchange, store of value and unit of account. Once that has happened the tokenized currency is to no extent different from a fiat currency except that its volume and market cap is not monitored and steered by any central institution, but only by the blockchain itself as well as the supply and demand.

### 4.1.2 Legal Implications

Different functions and different existing types of tokens do not permit a uniform legal framework. To the contrary, any category of tokens require a separate legal analysis and possibly different governing.

As shown above intrinsic tokens do not require any social acknowledgment, nor any underlying legal concept to become effective and efficient. Without requiring these two components, which are otherwise fundamental for any other asset, tokens form a new asset class. Since tokens simply trigger or complete a certain transaction in a protocol that cannot be changed or amended or terminated by a party that forms a contractual counterpart to the respective token holder, no law is required to guide the behavior of parties involved. There is also no party that makes promises to a token holder or create expectations other than that the software performs the operation the token is supposed to trigger. However, such protocol is fully transparent and by this the “promise of functionality” of the protocol can be completely validated by an actual or potential token holder. Considering this an intrinsic token does not require any trust or faith *ergo* it does require no law ensuring such behavior.

Asset-backed and rights related tokens are different. They function as representing off-chain assets and rights. Either by operation of law or through contractual structures each such token has an underlying promise that upon presentation of the token the ownership in an off-chain asset is assigned or a certain off-chain performance may be required. Concerning this an element of trust and social acknowledgement is required as in absence of those no reasonable party would engage in acquiring ownership in such tokens. Though, when tokens represent assets or rights, they might considered as a technically advanced to existing certificates with the same functions, but are legally in essence not different. Law might need to adapt to accommodate alternative ways of transferability, in particular with regard to endorsements. However, this requires a rather technical amendment than it is a fundamental change.

If tokens assume the function of currencies they should also legally be qualified as such. However, it would be inefficient to assume that any token *per se* is a currency. A currency is qualified as an instrument of payment that is accepted by a sufficiently broad market. Today, probably only Bitcoin comes closer to this requirement. It has been detached from its initial function and is accepted as compensation for the exchange of goods and/or services. However, in order to achieve general acceptance a currency needs to have a certain market cap. It might be a political decision to determine the threshold beyond which a token is qualified as a currency. However, today Bitcoin has a market cap of around 40-45 billion USD. The Euro has a money supply (M1) of more than 11.581 billion Euro, the Swiss Franc of almost 7.390 billion CHF. Given that Bitcoin is – if at all – a global currency and not just a regional, it is highly debatable whether Bitcoin actually already qualifies as a currency. Clearly, no other token does. Lawmaker and regulators will have to determine an appropriate market cap in order to qualify tokens as currencies.

## AML regulations (ICO vs. ITO)

Today blockchain-based assets, such as cryptocurrency or tokens, are quickly gaining economic weight measured by the total market capitalization. Once the value of blockchain assets has started to increase rapidly, the number of legal questions related to this phenomenon has also become significant.

There are two categories of legislation that were present in the legal discussions on cryptocurrencies almost from the very beginning: tax law and anti-money laundering (AML) regulations. Current emergence of tokens will only accelerate new legal questions in these two fields.

The reason is very simple: both tax and AML regulations usually come into play when we have some substantial economic value, especially fluctuating over time, and economic transactions related to that value. When we add into this the distributed nature of blockchains and anonymity of transactions, the result will be legal challenges that need to be addressed. Answers to legal questions will shape the development of the blockchain technology in each jurisdiction, including the EU.

### 4.2.1 Carte blanche of tokens regulation

Taking into account the rapid rise of tokens, the debate on mentioned legal aspects should be initiated now. This is even more important when we take into account that the EU's position of applying AML regulations to tokens is emerging at the moment.

It is important to begin the discussion without a very common bias. Since the first application of the blockchain technology was the cryptocurrency Bitcoin, many perceive blockchain in the context of theories of money and generally financial applications. Similarly, in the preceding years the legal discussion on blockchain technology was focused on its only application known at the time, namely cryptocurrencies.

As a consequence, all consensus that lawyers and regulators have achieved so far in terms of laws and regulations applicable to blockchain assets was reached with cryptocurrencies in mind. Therefore some thinking patterns are being transferred from legal analysis of cryptocurrency to this of tokens. What is even worse, sometimes this also happens at the legislative level due to inaccurately drafted legislation.

As clearly shown in previous chapter below, tokens share only some basic technological similarity to cryptocurrencies. However, their economic and social functions are sometimes very far away from the concepts such as currency or money. Even the category "tokens" itself can be divided into different sub-groups based on different token types.

This is why a simple extension of AML legislation to embrace tokens might not necessarily be the best possible solution. The carte blanche approach is needed, according to which the exercise over applying AML regulations to blockchain applications, recently done with regard to cryptocurrencies, should be done once again in the case of tokens.

### 4.2.2 AML regulations are important in the context of blockchain

There is no doubt that cryptocurrencies pose money laundering and terrorist financing risks. This is the reason for applying AML regulations to the exchange activity between cryptocurrency schemes and traditional regulated financial system. This is also recommended by the Financial Action Task Force (FATF), an international AML intergovernmental body. The EU has also followed these recommendations in the ongoing works on amendments to the 4th AML Directive.

### 4.2.3 Applying AML regulations to tokens

However, such legitimate and reasonable steps should not automatically result in the same legal conclusions with regard to any types of token. Very often the only common feature between a cryptocurrency such as Bitcoin and other blockchain token is a fact that both are functioning on a blockchain platform. Except that, differences might be significant; economic functions are just an example.

Therefore, while AML regulations are rightly being applied to cryptocurrencies, they are not suited to diverse class of tokens, which – as evidenced in chapter [\_\_] above – can be completely different even among themselves.

Wrong calibration of AML regulations resulting in applying them to any tokens irrespective of their nature might have profound negative side effects. While this type of regulations should mainly concern financial firms or other professional players engaging in exchange of value, application of AML regulations to tokens might affect innovators, young entrepreneurs, blockchain enthusiasts and start-ups, stifling blockchain innovation.

### 4.2.4 New framework

Based on the above remarks, the following factors should be taken into account when applying AML regulations to tokens:

* Tokens should not be equated with cryptocurrencies for the purpose of AML regulations.
* Lawmakers, regulators and relevant AML authorities should carefully approach tokens in order to not stifle innovation. In other words, money laundering and terrorist financing risks should be balanced against possibly much larger innovation gains.
* Not all tokens present identical money laundering or terrorist financing risks. It depends on the level of anonymity a given token, use cases, its convertibility into fiat money, etc.
* Only those tokens that present such risks, and moreover can be considered currencies (because of fulfilment of indicators based on three economic functions of money), should be covered by AML regulations (strictly speaking, the regulated activity should be exchanging such currency tokens into fiat money and vice versa);
* Generally speaking, at the time being non-currency tokens should be exempted from AML regulations, while cryptocurrencies should be covered to the extent to which they can be used to move value into and out of fiat currencies and the regulated financial system, in accordance with FATF Recommendations.

## Securities Law

Securities law imposes restrictions on issuer, investors, traders and trading platforms. Lawmakers consider securities per se as a risky asset class and built protections and safeguarding in order to prevent in particular non-sophisticated investors from taking unreasonable decisions. With this lawmakers attempt to balance lack of experience, asymmetrically provided information and future discount factors. Historic events, such as bubble-building and crashes have cautioned lawmakers and regulators. However, it is obvious that the safeguarding increases transaction costs when issuing or trading securities. Through this, financing of projects becomes more costly which increases barriers to entry. It is a valid economic assumption that projects requiring the adherence of of security law do not receive the required investments when the barrier is too high which hinders innovation.

Issuing tokens has become a popular and so-far apparently successful way of financing blockchain and even off-chain projects. It has been highly debated whether tokens are subject to securities law. It seems that no financial market regulator or supervisory authority so far has assumed a strong position on that. As indicated in the Section “Tokens” token fulfil various functions and emerge as different types. This indicates that tokens might be qualified differently with regard to securities law.

In the European Union member states work with different definitions of securities. Most countries provide a catalogue which may or may not be exhaustive. However, in essence Securities are defined as a certified representation (regardless whether an actual physical certificates are issued or not) to claim payment from a certain party, enforce shareholders rights, or derivatives of those, or future trading of certain assets. A further requirement is that such certificates are traded on a market.

If this is applied on various types of tokens intrinsic tokens will not be subject to securities law as it is understood in the European Union. Neither do they represent equity rights in a company or entity, nor do they result in a claim for payment and they clearly also do not represent any future trading of assets- Intrinsic tokens should therefore be exempted from European securities law already in its current form.

Asset-backed and rights related tokens are different. Whether securities law apply on them will in essence depend on the assets backing or the rights relating to the token. If those tokens represent assets a certification of which would be subject to securities law if traded on a financial market then also these tokens will unavoidably regarded as securities. The same holds for rights related tokens If those rights are related to payment claims or equity positions in entities that – again if certificated and traded on a financial market - would be subject to securities law the same will apply on such tokens.

With that regime the financing of smaller projects through issuing of tokens, in particular through tokens related to equity rights in entities become difficult, if not impossible. The transaction costs related to observing securities law, in particular for issuing prospectuses and related legal constraints, will in a substantial number of cases be too high to allow the fundraising process to happen at all. This in particular applies as such costs need to be pre-financed and will occur regardless of the outcome of the fundraising. In the past regulators have established exemptions from securities law or at least eased the burden for crowdfunding activities. In essence issuing tokens against payment is a crowdfunding activity. Its potential though is much higher, given that tokens can simultaneously be offered globally and are in theory much more liquid than instruments used in crowdfunding could have ever been. Considering this lawmakers are well advised to not only extend the scope of fundraising to tokens sale, but also lift the currently applied limitations with regard to ticket size and overall volume which in some member states is as low as less than EUR 10,000.00 per ticket and not more than [1.5] million EUR in overall volume (Germany). Whereas in particular the overall limit seems substantial on first sight it falls short of an average financing round of venture capital investments.

## Other relevant regulations

### 4.4.1 Payment Services

It might seem that the EU’s payment services and e-money regulations should apply to cryptocurrencies. However, this is not the case. The new Payment Services Directive 2015/2366 (“PSD II”)[[24]](#footnote-23) shall be applicable from January 13, 2018 in a concept of “full harmonization”.

The regulation of cryptocurrencies under the new Payment Services Directive was discussed, but in the end cryptocurrencies were not regulated in PSD II. Cryptocurrency is/was not regulated in PSD I and is not regulated by PSD II due to the definition of ‘funds’ in Art. 2(25) PSD II, which means banknotes and coins, scriptural money or electronic money (for electronic money see also below). In principle it is clear that PSD should neither apply to tokens.

### 4.4.2 E-Money

When talking about cryptocurrencies, there is usually a link to virtual money or electronic money as the “tokens” as forms of cryptocurrencies are in a way used as “money”.

“Electronic money” is defined in point 2 of Art. 2 of the E-Money Directive 2009/110/EC and means electronically, including magnetically, stored monetary value as represented by a claim on the issuer which is issued on receipt of funds for the purpose of making payment transactions as defined in point 5 of Article 4 of Directive 2007/64/EC (PSD I), and which is accepted by a natural or legal person other than the electronic money issuer .

In general, e-money has to be created on the receipt of funds and the issuer may not “freely” decide when/how to issue the units of e-money. Units of cryptocurrencies are created on the basis of an algorithm despite of the issuers will. In particular, it is widely accepted that Bitcoin as example for a cryptocurrency is not considered electronic money in that sense[[25]](#footnote-24) Bitcoins are *per se* anonymously created and are not bound to its respective issuer.

However, e-money related to US-Dollar-token or Euro-token may be considered e-money, which stresses the fact, that for any other cryptocurrency and its tokens these provisions shall not apply.

## 4.5 Data Protection

The applicable data protection Directive 95/96/EC as well as E-Privacy Directive 2002/58/EC and respective national laws as well as their legal successors (the General Data Protection Regulation Nr. 679/2016 (“GDPR”) applicable from May 25, 2018 and the reviewed e-Privacy Regulation) may be a potential regulatory challenge regarding blockchain and cryptocurrencies.

For the purpose of this analysis we want to differentiate between a closed and non-public platform, community or system with limited access (“permissioned ledgers”) by contrast to a public system, community or platform (“public ledgers”). However, from a practical point of view, usually no personal data as defined in Art. 4(1) GDPR are affected by blockchain technologies *per se*. Furthermore, in the case of any non-public platform, community or system with limited access (also a “permissioned ledger”), the availability of the blockchain to trusted parties only causes a relatively lower risk of cyber attacks and security breaches[[26]](#footnote-25).

### 4.5.1 Personal Data in Blockchain

According to Art. 4(1) GDPR ‘personal data’ means any information relating to an identified or identifiable natural person (‘data subject’); an identifiable natural person is one who can be identified, directly or indirectly, in particular by reference to an identifier such as a name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that natural person. The data revealed by a person in a blockchain may usually not considered personal data in that sense and/or details about a person, because usually those data are self-created by the respective person and ‘aliased’ or ‘pseudonymised’. If the other participants do not have access to the information behind those ‘pseudonymised’ data, these could be considered ‘anonymised’ data used within this technology. Only with the use of the ‘public key’ of a participant is associated with other identifiable information, is the person behind those ‘anonymised’ data revealed. Therefore, in “public communities” usually no personal data are processed and used as these are ‘anonymised’ or at least ‘pseudonymised’. By contrary, in closed and regulated system (“permissioned ledgers”) using this technology, each activity shall be track-able and each person must reveal personal data. Therefore, only in these permissioned ledgers personal data and respective legal provisions are applicable and relevant.[[27]](#footnote-26)

### 4.5.2 Right to Erasure (Right to be Forgotten)

In particular, the right to erasure (right to be forgotten) in Art. 17 GDPR and other principles, which protect privacy and personal data affected may cause issues[[28]](#footnote-27), which may be solved according to the existing European data protection regulations as set forth below.

The right of access by the data subject according to Art. 15(1) GDPR may be addressed by any participant within a public ledger, as the individual can simply download blockchain and access any data about them, although this provision may not apply due to the lack of personal data (see above). When using blockchain/cryptocurrency within a permissioned ledger, the right of access may be addressed to each participant (as node) of the permissioned ledger or, in particular, by the ‘creator’ of the respective community (as permissioned ledger), for example due to general terms and conditions accepted by each participant joining this platform-community.

The participants of a permissioned ledger are then each and all considered responsible controllers according to Art. 4(7) GDPR, whereas the concept of joint control in Art. 26 GDPR may be used as these participants are two or more controllers jointly determining the purposes and means of processing. Details may then be laid down in general terms and conditions relating to the platform (permissioned ledger) using cryptocurrency.

Such terms and conditions may also release participants of a permissioned ledger from his/her duties as controller, in particular, if they are considered ‘consumers’ according to EU law. Instead, the business offering the platform as permissioned ledger is considered (legally) responsible. Participants of public ledgers may not be controllers according to Art. 4(7) GDPR, if no personal data are involved.

The right to erasure (right to be forgotten) in Art. 17 GDPR as well as related rights (such as in Art. 20(1) and (2), 21, 35 GDPR) may be addressed due to the concept of blocking the respective data relating to blockchain and/or cryptocurrency technologies, as happening already in existing other systems and technologies.

In general, most technologies may not be able to fulfill a complete “erasure” of data as a matter of fact, but only securely “block” the access (of non-authorized third parties) to those data. This ‘blocking’ of data resulting in an actual erasure may be legally required for several reasons. However, these facts are be considered and already partially addressed in the existing regulation of Art. 17 GDPR. Due to the nature of systems using blockchain and/or cryptocurrency technology (personal) data may not always be “erased” completely. However, the concept of “blocking” the data instead of actually erasing them is already embedded in Art. 17 GDPR and shall be applicable to blockchain technology and related personal data. Additionally, a certain quota of consensus (for example 51%) may in some cases be used for erasing those data. Within permissioned ledgers this obligation of the respective participants to come to a respective consensus may also be addressed as legal duty within platform terms and conditions.

Technically, the process of erasure may work like this: The private key to de-pseudonymised or decrypt the data could be held by the individual person and the third party controller, such as the trusted party in permissioned ledgers as part of a “multi-sig”, i.e. the private key is technically assigned to both of them. Both the individual person and the trusted party hold the keys, so both are required to unlock the data. If the individual person wishes to erase his/her data (such as the right to be forgotten, Art. 17 GDPR and related rights), the key to unlock the data could be destroyed. The data itself would remain in the blockchain, but could not be read by anyone if the respective key was destroyed by the individual person. To avoid the data being de-pseudonymised or decrypted in the future because of cyber attacks, the encryption algorithm shall have a certain level of ‘quality’ according to technical standards and methodologies. Furthermore, the disclosure of sensitive data, such as biometric data or data concerning health, with the use of this technology shall be avoided, if possible. These standards shall be subject to a respective guideline by the (future) European Data Protection Board and/or authorities in the member states.

### 4.5.3 Legal Use of Data within the Blockchain

Furthermore, the respective personal data are used in a legal way on the basis of existing data protection provisions. If this technology is used in a closed and regulated system (“permissioned ledger”) the individual persons as participants and their personal data affected are collected and used according to Art. 6(1)(b) GDPR. If such person enters into a contract with the other participants in this permissioned ledger including the trusted creator of the respective platform, for example via general terms and conditions, the processing is necessary for the performance of a contract to which the data subject is party or in order to take steps at the request of the data subject prior to entering into a contract, see Art. 6(1)(b) GDPR. The same may apply for public ledgers, in the event personal data are relevant, as the existing contractual relationship exists as ‘a matter of fact’ and blockchain is regulated, as we also suggest in this report.

Developing and implementing the necessary requirements relating to the blockchain and cryptocurrency technologies may therefore be achieved by using the existing data protection and consumer protection regulations and directives on European level.

As for other persons as “non-participants” of the permissioned ledger, whose personal data may be affected, the likelihood of data protection breaches is relatively low *per se* and may be avoided as well. First, at least for permissioned ledgers, persons who are not participants may not be affected and none of their data collected and/or used. Second, in most cases, not their individual “clear” data will be used but only pseudonyms.

If information by third parties in form of personal data are used within a blockchain technology, the identity of these person shall not be revealed that the respective person’s data are considered ‘anonymised’. Within a platform as permissioned ledger this may be addressed and covered by binding terms and conditions. For a public ledger personal data will most likely not be used and/or affected (see above).

Therefore, if calling for a specific regulation of cryptocurrency on the basis of GDPR for those personal data from non-participants (or other), the existing concept of ‘aliased’ or ‘pseudonymised’ information may be sufficient. The responsible data protection authorities will be in need of some guidelines, which might be covered by the Art.-29-Data-Protection-Working-Party or (future) European Data Protection Board (according to Art. 68 GDPR).

Pursuant to Art. 4(5) GDPR ‘pseudonymisation’ means the processing of personal data in such a manner that the personal data can no longer be attributed to a specific data subject without the use of additional information, provided that such additional information is kept separately and is subject to technical and organisational measures to ensure that the personal data are not attributed to an identified or identifiable natural person.

In principle, when ‘pseudonymised’ data of a user are processed and used, each user or person affected shall be informed in detail due to his/her respective rights such as set forth in Art. 12 ff. GDPR. Furthermore, in certain events each user/person shall give his/her explicit consent for the use of his/her data, such as with an opt-in, like with the use of cookies as set forth in the existing Directive 2002/58/EC. The reviewed ePrivacy Directive (see above) is even minimizing this opt-in requirement. However, for the use of cryptocurrency technologies and related personal data, the principles shall apply and keep the users always informed. As in closed systems (permissioned ledgers), the user may always decide, whether to join this permissioned ledger or not, and act as an informed individual and his/her explicit consent. In general, one could argue that the existing regulations and principles set forth in GDPR, the reviewed ePrivacy Directive as well as the existing consumer protection regulations may be fully sufficient for these goals. However, guidelines and best practices should be targeted. Furthermore, blockchain technology may also be a chance to strengthen data protection and regulated technologies.[[29]](#footnote-28)

# European VAT regulations

## Status quo

Mining and trading of both Cryptocurrencies and cryptotokens poses numerous issues regarding tax law. Since corporate and personal income taxes are yet to be harmonized throughout the EU, the following will focus on value added tax which is dealt with by the DIRECTIVE 2006/112/EC of 28 November 2006 on the common system of value added tax (the “VAT Directive”).

In 2015 the European Court of Justice (“ECJ”) ruled that

* exchanges of Bitcoin for traditional currencies and vice versa constitute a supply of a service effected for consideration;
* these exchange transactions are tax exempt according to Art. 135(1) VAT Directive – irrespective of whether they are legal tender in one or more countries.

The ECJ based its decision on several considerations, notably on the fact that (i) as with all financial transactions it is difficult to determine the taxable amount (and the amount of deductible VAT) and that (ii) the participating parties considered and accepted Bitcoin as an alternative to legal tender with the purpose to be a means of payment.

## 5.2 VAT exemption for all kinds of cryptocurrencies / cryptotokens

Within the last few years, more and more different kinds of cryptocurrencies and cryptotokens have emerged – and even more are going to be created, possibly at an ever higher frequency. This development includes tokens which do not only stem from computational power in a network or protocol, but also represent all sorts of things in the “non-digital world”, e.g., storage, network or even equity in the form shares or interest. They usually can be exchanged for these services and goods, but can also be traded on secondary markets.

The ECJ ruling presented above dealt with Bitcoin specifically. It is rather controversial among experts, whether the court’s findings can be extended and applied to all cryptocurrencies and –tokens.

However, the reasoning on which the ECJ based its verdict shall in our opinion apply not only to Bitcoin, but to all kinds of cryptocurrencies and cryptotokens which are regularly traded for the purpose to be a means of payment. In our view, this involves – at least – all currencies/tokens which can be found on exchanges like *Poloniex*.

Both EJC’s abovementioned core arguments also hold true for tokens which, unlike Bitcoin, are linked to specific services and/or goods, but are regularly exchanged for traditional currencies (and vice versa): Once you trade crypto tokens in exchange for traditional currency, you engage in a financial transaction – no matter if the token you have received in exchange has additional features compared to Bitcoin. Thus, the difficulties to determine the VAT base remain the same as with Bitcoin.

Furthermore, only because a token might be linked to equity or digital storage does not mean it has a purpose other than being a means of payment. In contrast, *especially* in cases in which a token’s issuer accepts these tokens in exchange (i.e. as a form of payment) for a particular service, the token’s purpose will be to enable this sort of payment, whereas in the case of Bitcoin, one could argue that the there is no *a priori* payment opportunity involved.[[30]](#footnote-29)

Currently, we are quite confident that the ECJ meant its ruling to be applicable to all cryptocurrencies and –tokens or – at least – would rule similarly in future decisions. However, in case the court should decide in favor of the opposite one day, we strongly encourage EU legislative bodies to prepare for changes in the law (i.e. the VAT Directive) that explicitly declare transactions involving crpytocurrencies and cryptotokens VAT exempt.

Apart from the legal argument, it is also a political imperative to ensure that cryptocurrencies and cryptotokens can be exchanged for traditional currencies without a VAT tax burden. Otherwise, none of these new currencies and tokens would spread throughout the EU and people in EU member states would essentially be excluded from using them as a means of payment. We believe that for the EU, being one of the world’s economic superpowers, it is vital to continue to play an important role in the emerging crypto token / Blockchain market and therefore to set the foundation and framework accordingly.

# Approaches to Blockchain in different Jurisdictions

## Proposals and approaches taken in the United States

Cryptocurrency and blockchain technology have certainly caught the attention of institutions and regulators in several jurisdictions around the globe. Some of those jurisdictions have actively engaged in regulatory processes which provide learning opportunities for markets where cryptocurrency and blockchain are becoming more relevant.

For purposes of this report, one major jurisdiction has been chosen in which regulations and/or regulatory proposals have been introduced addressing both cryptocurrency and blockchain technology: United States of America.

Stemming from the Constitution, the American legal system is comprised by two levels which distribute the powers between the federal and the state governments. For purposes of, among others, commerce, any power not delegated to the federal level nor prohibited to the states remains at the state level. In this sense, matters related to inter-state commerce are regulated at the federal level, while matters related to the intra-state commerce are reserved to the states. Since commerce is an activity that takes place at both levels, the particular facts of each topic and/or case will determine whether federal or state law would apply.

In particular, cryptocurrency has been a matter so far discussed at the state levels under the definition of money (U.C.C Sec. 1-201(a)(24)), however, recent developments at the Office of the Comptroller of the Currency (OCC) have brought cryptocurrency to federal level consideration. On the other hand, certain uses of blockchain technology such as blockchain tokens have been subject to follow up by federal level institutions and regulators such as FINRA and SEC under federal securities regulations (e.g. Securities Act of 1933).

### Cryptocurrency

Cryptocurrency, or virtual currency as broadly referred to by several U.S. states, has been subject to regulations or proposed regulations in several U.S. states. Under the understanding that the legal question is whether cryptocurrencies are money, states have either defined their positions on the current regulatory framework or introduced new regulations on the topic. States such as Texas, New York, California and Illinois have made important moves to (de-)regulate cryptocurrency activities. Without doubt, these states are large players in the U.S. economy and their approaches towards cryptocurrency have immediate impact on the market. The consequences of falling under the definition of money or not are directly related to compliance with laws and regulations related to banking activities such as the Bank Secrecy Act[[31]](#footnote-30) as well as money transmission, among others.

Since the state-level approach is not the same in every state, companies might find difficult to determine the extent of their obligations when acting in different U.S. jurisdictions. As an alternative, companies might explore a potential new federal-level license currently in study at the OCC, which is in principle aimed to banking activities, in order to avoid state-by-state cumbersome applications and uncertainty[[32]](#footnote-31).

Texas:

The second biggest U.S. economy[[33]](#footnote-32) has determined that under its regulatory framework[[34]](#footnote-33) cryptocurrencies do not constitute money nor have monetary value and, therefore, are not subject to money transmission regulation nor constitute currency exchange. Cryptocurrencies are broadly defined as “*an electronic medium of exchange typically used to purchase goods and services from certain merchants or to exchange for other currencies, either virtual or sovereign*”[[35]](#footnote-34) while money or currency[[36]](#footnote-35) is defined as coin and paper with legal tender, issued and accepted by a government[[37]](#footnote-36). Since cryptocurrency is not considered to be coin or paper issued by a government, it does not fall within the statutory definition of money.

The consequences are mainly two: (1) no currency exchange occurs when cryptocurrency is exchanged by other cryptocurrency or by fiat currency, and (2) no money transmission occurs when transmitting cryptocurrency. In the first case, exchange of cryptocurrency for another cryptocurrency or exchange for fiat currency is not currency exchange because the legal requirement of “currency” is not complied with by cryptocurrencies. Likewise, when cryptocurrency is exchanged for fiat currency, no money transmission occurs but it is rather a sale of goods. In the second case but under the same argument, transfer or transmission of cryptocurrency is not money transfer, however, when a third party is involved and fiat currency is received in exchange of cryptocurrency, money transmitting licensing requirements must be complied by the third party transmitter.

New York:

In August 2015, New York State changed its Financial Services Regulation to include regulation on cryptocurrencies and its operations. More specifically, the regulation introduced licensing requirements on cryptocurrency activities, know as BitLicense. For these purposes, virtual currency was defined as a “*digital unit that is used as a medium of exchange or a form of digitally stored value. Includes digital units of exchange that (i) have a centralized repository or administrator; (ii) are decentralized and have no centralized repository or administrator; or (iii) may be created or obtained by computing or manufacturing effort*”. Certain exceptions were introduced to avoid catching within the definition activities such as e.g. online gaming platforms without external market or reward programs. Virtual currency activities were, therefore, subject to licensing requirements. Among the activities subject to licensing requirement are: receiving cryptocurrency for transmission[[38]](#footnote-37) or transmission thereof[[39]](#footnote-38); storing, holding or maintaining custody on behalf of others; buying, selling or performing exchange services as a customer business, controlling, administering or issuing cryptocurrency. As a consequence, no person is allowed to engage into cryptocurrency business activities without a license, and such licensing requirements cannot be overcome by using an agent.

Following the BitLicense introduction, 15 companies[[40]](#footnote-39) operating in the bitcoin/cryptocurrency sphere left New York State for states with more beneficial or no regulations. As of June 2016, 26 applications for BitLicense were filed in New York, four were issued and two denied[[41]](#footnote-40). As of January 2017, a fifth license was issued and four applications were denied[[42]](#footnote-41). The general community perception was negative especially due to the cost of the BitLicense which, *de facto*, blocked participation of startups without very strong economic backing[[43]](#footnote-42), therefore perceived as reducing development and innovation in this space.

Illinois

On November 2016, the Illinois Department of Financial and Professional Regulation (IDFPR) published regulatory guidance on the application of the Illinois Transmitters of Money Act (TOMA) to cryptocurrency activities. The aim of such guidance was not to introduce new legislation but rather to provide with clarity on existing regulation’s application on cryptocurrency activities. The main target of the guidance was *decentralized* cryptocurrency understood as digital currency not created or issued by any particular person or entity, with no administrator or central repository, without legal tender but convertible into sovereign currency and without intrinsic value[[44]](#footnote-43).

In this sense, for the IDFRP decentralized cryptocurrency cannot be considered as money within the applicable definition of Section 5 of TOMA because it has not been authorized or adopted by a domestic or foreign government as part if its currency. The guidance took a non-exhaustive list approach to provide with real-case situations that allow market participants to identify whether a transaction with cryptocurrency would trigger licensing requirements. For instance, while transmission of cryptocurrency does not require a license as long as “money” is not involved, if such transaction involves sovereign currency and a third party it would be classified as money transmission and subject to licensing requirements. On the other hand, if no third party is involved, such as with some cryptocurrency ATMs, no license would be required since no business of receiving money for the transmission of money exists. The same no-license approach was taken for exchanges from one cryptocurrency to another, mining processes, blockchain technologies with non-monetary purposes, among others.

### Cryptotoken – Securities Regulatory Panorama

At the federal level, some U.S. regulators have moved to issue reports and actively seek for community guidance to determine whether securities regulations might apply to certain uses of blockchain technology beyond cryptocurrency. In the past months, with the development of new forms of cryptotokens, regulators are increasingly asking questions related to the applicability of these securities regulations in the event of public offering of tokens (also known as ICOs).

Questions have arisen around the interpretation whether tokens can be understood as securities, specifically investment contracts, under the Securities Act of 1933 and the Securities Exchange Act of 1934. Case law has determined what it can be understood as investment contract[[45]](#footnote-44) but the Securities Exchange Commission (SEC) has not issued an official statement about the application of such interpretation to cryptotokens. Shall cryptotokens be deemed investment contracts, any public issuance should comply with registration requirements (or apply for exceptions), target specific investors and conduct AML/KYC procedures as set forth for other securities issuances.

On the other hand, the Financial Industry Regulatory Authority (FINRA) published a report on distributed ledger technology and its implications for the securities industry in January 2017 as well as issued a call for comments on such report. Generally, FINRA’s report describes the technology and potential developments as well as outlines potential issues that market participants should have in mind when developing applications within the equity, debt, derivatives and industry utilities markets. FINRA identifies transparency risks in personal data management, operational risks derived from network security issued, as well as regulatory risks such a compliance with broker-dealer rules for certain network operators.

As seen from above, these regulatory authorities have not signaled an interest in changing the regulatory environment but rather fitting these new technological developments into the current regulations.

### Delaware Blockchain Initiative

The State of Delaware launched the Delaware Blockchain Initiative (DBI) on May 2016 aiming to retain the State’s position as leader in the U.S. market for corporate formations. The DBI will allow the use of distributed ledger technology in several key areas of corporate law in the State of Delaware, in a three-milestone process which started with the introduction of changes to Delaware’s corporate law[[46]](#footnote-45). The first milestone will create the possibility for corporate entities to maintain their stockholders’ records as well as issuances and transfer of stock in an electronic stock ledger with full legal force. This is a key innovation in the law, as better explained by Matthew O’Toole, partner at Potter Anderson & Corroon LLP, a law firm involved in the legislative change: “*The amendments provide explicit statutory authority for Delaware corporations to use blockchain technology in creating and keeping internal corporate records (including most importantly the corporation’s stock ledger) and in communicating with stockholders. So Delaware law will provide clarity and certainty that blockchain records, including specifically a stock ledger maintained on a blockchain, are valid. The corporate statute also now will provide explicit requirements for the content of the stock ledger, again promoting clarity and certainty. The amendments effectively allow for the creation of so-called “blockchain shares.”*”. In addition to the above, two additional milestones implementing smart contracts for lean filings (called UCC filings) and distributed ledger shares are in process of development. Among other benefits for the U.S. corporate/securities legal system, the DBI would allow immediately mirroring shareholders’ structure under state corporate laws with shareholders’ structures upon shares trading (under securities laws), eliminating current risk in shares’ trading such as the Dole Foods case, where due to unsettled trades (among other reasons) investors submitted more claims, validated by brokerage account statements, to 49.2 million shares when only 36.8 million shares were legally issued and outstanding, leading to long and time consuming litigation. As mentioned by Mr. O’Toole: “*at a high level, the changes reinforce the forward-looking posture of Delaware’s state government when it comes to business matters, including technological innovation and our corporation law (...). More specifically, Delaware should be recognized as a jurisdiction that enables and fosters the issuance and trading of blockchain shares*”, which would change the result in cases such as the one mentioned eliminating the disparity and thus, the litigation potential. Andrea Tinianow, director of the DBI, explained that the motivation behind this initiative was Delaware’s business friendly culture: “*the Delaware Blockchain Initiative was driven by Delaware’s corporate constituents. Our mission is to provide our corporate clients with the service and solutions they need. So, when our clients articulated a desire to issue shares on a blockchain, we moved quickly to provide an enabling framework to do that, and at the same time demonstrate our support for the technology. By deploying the technology in state government, we believe that we can provide our services more efficiently and provide greater value to our clients*”. Undoubtedly, Delaware’s move embracing blockchain technology is a strong signal that state regulators are starting to understand the benefits of this technology, its multiple applications and the economic benefits of being an early adopter of this technology, as Ms. Tinianow said: “*once the corporate blockchain legislation is enacted (hopefully, this summer), Delaware companies will have the legal authority to issue shares and maintain their stock ledger on a distributed ledger. This will provide tremendous benefit to companies registering on a distributed ledger cand their investors. In the near term, we also anticipate providing creditors the ability to file smart UCC financing statements which will also lead to greater efficiencies and reduced risk for creditors (and debtors). Long term, we expect that distributed ledger technology can become a platform for solving problems across borders in the US and the world*”. The ability to automate UCC filings in Delaware will streamline and automate workflows related to the perfection of security interests for lenders in collateral. Caitlin Long, chairman and president of the DBI’s technology partner, Symbiont, said: “*the UCC process is currently manual, slow and error-prone. Liens are effective for a maximum of 5 years, but if the term of a loan is longer than 5 years the lender must remember to renew at the 5th anniversary. The DBI will soon be offering an automated version of UCC filings that reduces the risk of errors and ensures that the lender’s claim to collateral is always legally secured*”. This tool will be important to lenders in the trade finance markets, where some banks file multiple UCC financing statements every day and would welcome a process that is not only digital but also dynamic and can be integrated with existing collateral management tools. As of the date of this report, the amendments introduced to Delaware’s corporate law were approved unanimously by the State’s senate and by the judiciary committee only pending a meeting of the general assembly.

### Other Developments

Additional U.S. States have also shown interesting developments regarding blockchain technology. On early June 2017, the State of Nevada approved legislation related to the use of blockchain technology, in which relevant changes were introduced such as: (i) prohibition on charging taxes, requiring licenses or permits for the use of blockchain technology, (ii) enabling the State to perform some duties using blockchain, and (iii) allowing blockchain records to satisfy a requirement for written records or signature under certain circumstances[[47]](#footnote-46).

### What could be learnt from the U.S. experience?

The duality of the U.S. federal system has derived in a convoluted and uncertain panorama for blockchain technology, which may serve as learning experience for European regulators of what not to do.

Since when it comes to cryptocurrencies each U.S. State can take a different approach, companies have started to forum-shopping for those better conditions offered by a particular State. After the introduction of the BitLicense, all cryptocurrency companies active in the State of New York left, creating an economic disadvantage as well as high criticism on the regulators’ understanding of cryptocurrency, especially because the regulation has proved already outdated. Likewise, States like Texas where no regulation applies to cryptocurrency have created the problem that companies incorporated or doing businesses in that State cannot do businesses in another State without having to seek for additional permits or changing their business model. A third approach taken by States such as Illinois have been better received because it clearly identifies that *cryptocurrency is not money* and cannot be treated as such but rather limit the applications of any existing regulation to transactions involving *sovereign money* and cryptocurrency (only to the extent sovereign money is used).

A combination of the later approach (*cryptocurrency is not money*) together with a uniform European legal act (such as a directive or regulation) should be path taken by the European regulator. The multi-jurisdictional U.S. system has ultimately derived in cryptocurrency companies leaving the U.S. and moving to jurisdictions where there is a uniform clear approach and understanding to cryptocurrencies. Europe can become that destination provided that uniform legislation and treatment is implemented at the European level. A multi-jurisdictional approach would make Europe non-competitive and unattractive compared with other jurisdictions (such as Singapore) that have uniform regulations.

On the side of cryptotokens, the U.S. regulators have remained practically silent while the industry calls for a clear position on whether certain cryptotokens are securities or not. SEC has not issued any official or unofficial position on this matter and the intervention of FINRA can be hardly seem as a position but rather a summary of all financial regulations that might be applicable to market participants. There has not been clear guidance, which derives in uncertainty, lack of investor and consumer protections, abuse of market position, among others, as public offerings of tokens appear that might endanger the ecosystem. The lack of regulatory guidance in the U.S. has made companies simply completely avoid the market by expressly excluding U.S. investors from any offering of tokens or using more favorable jurisdictions (such as Singapore) to set up elaborated structures. Europe could reshape and come to the forefront of the ecosystem if clear regulatory pan-European guidance is issued. Such approach should clearly distinguish between the different type of tokens in order to avoid classifying as securities tokens with no equity or equity-derived participation rights (such as product use tokens) and provide with enough guidance as to the extent of current’s regulation application to the ecosystem or the potentiality of treatment of cryptotokens as a new asset class.

Finally, the DBI is paving the way for corporate law to move into blockchain technology. Europe might be inspired by this practice and take it a step further supported by the technology’s capabilities of bringing on-chain current off-chain processes prone to human error such as public (and in some jurisdictions private) companies shareholders’ registers, land registers, collateral registers, etcetera. Additionally, it could be used as an opportunity to look for strategic partnerships between Europe and Delaware, enabling European companies to do businesses between both jurisdictions in a simpler legal and corporate set up as that currently existing, which would have the effect of attracting more entities to set up and maintain their main businesses in Europe instead of entirely flipping to the U.S.

## Practical experience with regulations in member states (EU)

Wardyński & Partners has coordinated the effort to gather national experiences with regard to regulation of cryptocurrencies, tokens and initial coin offerings. Law firms from several member states of the European Union and Switzerland participated in this project by answering questionnaire on this topic.

Answers given by the law firms constitute annex [\_\_] to this report. Summary of them will be available in the final version of the report upon receiving all questionnaires.

# Conclusion

As established earlier in this report, the development of blockchain-related technologies as well as the surrounding industry has matured significantly since the inception of Bitcoin. Increasingly, the barrier to further maturation and attendant economic growth is to be found in legal and regulatory uncertainty facing serious investors and existing institutions. At the same time, two time-sensitive issues present themselves to the European regulatory bodies:

1. The growth rate of the sector as a whole on the one hand, and the speed & size of many so-called ICOs on the other, both point to increasing potential for a bubble forming that concerted action can still prevent from harming regular people
2. Lack of regulatory clarity risks leading to an irreversible loss of opportunity for the entire European Union as more agile jurisdictions attract capital and entrepreneurs to emerging innovation hubs (e.g. Dubai, Delaware, Singapore, etc)

The signatories therefore believe that it is high time for the relevant bodies to act in the interest of their member states and craft a simple, robust regulatory framework.

# Writers and contributors

Special thanks to the leading contributors to this report, for your thorough research and work:

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Thanks to the community for contribution and inspiration:

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# Appendix: National Questionnaires

## 9.1 Poland

## 



1. **Does your jurisdiction have any specific legislation on Cryptocurrency?**

NO

At the moment there are two legislative bills in the works that aim at introducing a legal definition of “virtual currencies”: the first is a draft act implementing the AMLD and the second is a draft act on the Central Database of Accounts.

2. **Does your jurisdiction have any specific legislation on Tokens and/or ICOs?**

NO

3. **Have the authorities in your jurisdiction (e.g. the financial regulator) adopted any position or implemented any policy on Tokens and/or ICOs?**

NO

In the early 2017, the Polish Financial Supervision Commission (Komisja Nadzoru Finansowego, KNF) established a working group on fintech made up of private sector representatives and public institution officials. Legal and regulatory aspects of ICOs were considered by the group, but KNF has not yet adopted any official position with this regard.

4. **How would the law in your jurisdiction that implements the following EU legislation apply to (i) Cryptocurrency, (ii) Tokens, (iii) ICOs?**

4.1. **PSD**

* **Cryptocurrency**

The Polish Payment Services Act (implementation of the PSD) does not apply to Cryptocurrency. The main reason is the wording of the key definition of “funds”, which does not include Cryptocurrency.

* **Tokens**

Depending on the exact nature of Tokens, it cannot be entirely excluded that the Polish Payment Services Act will apply. However, in principle, the conclusion is the same as in the case of Cryptocurrency.

4.2. **EMD**

* **Cryptocurrency**

Cryptocurrency falls outside the scope of the Polish Payment Services Act, which implements the EMD. The definition of electronic money assumes a central issuer and, since there is no such entity behind Cryptocurrency, these regulations will not apply.

* **Tokens**

While most Tokens existing on the market at the moment do not seem to qualify as e-money, it cannot be excluded that some will fall within the scope of the Polish Payment Services Act.

4.3. **VAT Directive**

* **Cryptocurrency**

The practical approach of the tax authorities before the 2015 ruling of the Court of Justice varied, but since then it has been established that exchange of Cryptocurrency for traditional currencies and vice versa is tax exempt.

* **Tokens**

There is no substantial legal practice with regard to taxing Tokens. While there are some similarities with Cryptocurrency, it cannot be excluded that various aspects of applying VAT legislation to Tokens will be different, depending on the structure and legal nature of the specific Token.

4.4. **AMLD**

* **Cryptocurrency**

Entities that exchange Cryptocurrency for fiat currencies and vice versa, and conduct another economic activity such as trading, are not specifically covered by Polish law implementing the AMLD.

This will change once the most recent amendments to the AMLD are adopted by the EU and implemented in Poland. The government has already published a legislative proposal in this regard.

* **Tokens**

Similarly to Cryptocurrency, Tokens and activities related to them (such as trading) are not specifically covered by the current Polish implementation of the AMLD. Legislative changes at the EU level related to bringing “virtual currencies” under the scope of the AMLD may potentially result in the application of AML laws also to Tokens. This will depend mainly on the final definition of the term “virtual currencies” and its interpretation by the authorities.

4.5. **MiFID**

* **Tokens**

It is possible that Tokens will be covered by Polish laws implementing the MiFID. Two factors that seem to be the most important here are the legal nature (status) of the Token and the role of its issuer (if it can be identified). In a nutshell, it seems that the risk of triggering the application of regulations is higher if the structure of Tokens resembles that of financial instruments.

* **ICOs**

It cannot be excluded that a given ICO falls under the law implementing the MiFID regime in Poland. The deciding factor would be the legal nature of Tokens that are sold and the structure of the ICO itself.

4.6. **Prospectus Directive**

* **Tokens**

It cannot be excluded that the law implementing the Prospectus Directive could be applied to Tokens in the context of their public sales (ICOs), mainly depending on the legal status of particular Tokens.

* **ICOs**

See the preceding answer.

5. **Would the regulatory or tax treatment of Tokens differ from the treatment of Cryptocurrency in your jurisdiction?**

There is no substantial legal practice in this respect. While it may be expected that the treatment of Cryptocurrency will be in principle similar to that applicable to Tokens, it cannot be excluded that some differences between them may also result in distinct tax and regulatory consequences.

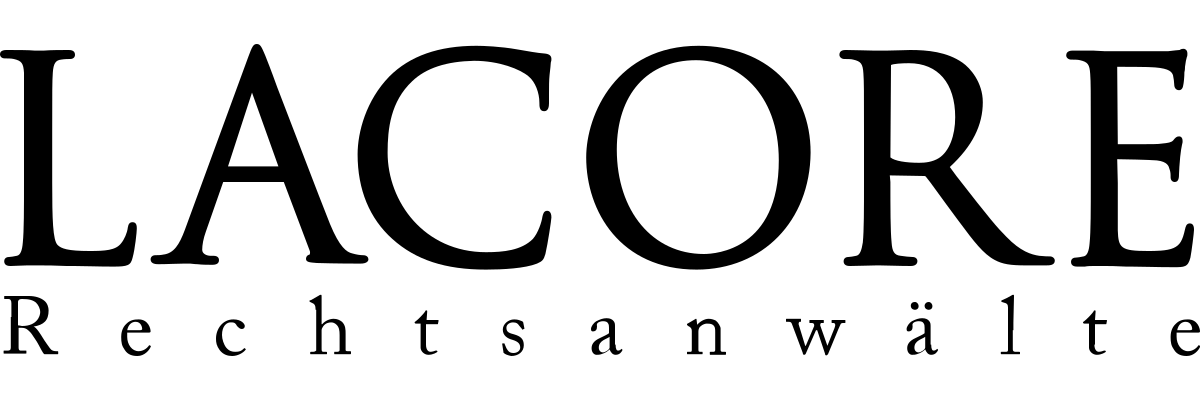
6. **Does your jurisdiction have any specific legislation or public policy on ICOs?**

NO

## 

## 9.2 Germany

## 



1. **Does your jurisdiction have any specific legislation on Cryptocurrency?**

NO

2. **Does your jurisdiction have any specific legislation on Tokens and/or ICOs?**

YES

One might argue that a Token sale is subject to crowdfunding legislation in Germany. However, that legislation would only apply if equity Tokens or Tokens related to a loan are sold. To our knowledge no Token sale structured like this has occurred in Germany so far.

3. **Have the authorities in your jurisdiction (e.g. the financial regulator) adopted any position or implemented any policy on Tokens and/or ICOs?**

YES

In a notification the German financial supervisory authority (Bundesfinanzdienstleistungsaufsicht, BaFin) has stated in 2013 that it qualified Bitcoin as a “calculative unit” (Verrechnungseinheit). However, it is obvious that this is a statement related to Bitcoin only and cannot be applied on other tokens or cryptoyurrencies.

A notification from BaFin dated 2016 does not only refer to Bitcoin but extends the previous qualification of Bitcoin to any virtual currency as defined by EBA. However, the notification does not specify the requirements (apart from referring to EBA) and does not differentiate explicitly between cryptocurrency and tokens.

1. How would the law in your jurisdiction that implements the following EU legislation apply to (i) Cryptocurrency, (ii) Tokens, (iii) ICOs?
   1. **PSD**
      1. **Cryptocurrency**

According to a notification by the German Federal Financial Supervisory Authority (Bundesfinanzdienstleistungsaufsicht, BaFin) for virtual currency the provisions relating to “e-money” in the German Payment Services Act (Zahlungsdiensteaufsichtsgesetz, ZAG) (relating to the PSD and EMD) shall not apply as there is no “issuer” who issues Bitcoin vis-à-vis a claim against him/it as issuer. However, according to BaFin this shall not apply if there is a central authority behind the virtual currency as such issuer (as for example Liberty Reserve).

* + 1. **Tokens**

See 4.a.i. above. So far not differentiating.

* 1. **EMD**
     1. **Cryptocurrency**

According to to a notification by the German Federal Financial Supervisory Authority (Bundesfinanzdienstleistungsaufsicht, BaFin) for virtual currency the provisions relating to “e-money” in the German Payment Services Act (Zahlungsdiensteaufsichtsgesetz, ZAG) (relating to the PSD and EMD) shall not apply as there is no “issuer” who issues Bitcoin vis-à-vis a claim against him/it as issuer. However, according to BaFin this shall not apply if there is a central authority behind the virtual currency as such issuer (as for example Liberty Reserve).

* + 1. **Tokens**

See 4.b.ii. above. So far not differentiating.

* 1. **VAT Directive**
     1. **Cryptocurrency**

With regard to VAT Cryptocurrency is qualified as “money” through respective ruling of the European Court. Hence, VAT would not apply on its sale or purchase.

* + 1. **Tokens**

So far, German law with regard to VAT do not differentiate between Cryptocurrency and Token.

* 1. **AMLD**
     1. **Cryptocurrency**

Cryptocurrency is not qualified as “money” under German law. Hence, AML would currently not apply on cryptocurrencies.

* + 1. **Tokens**

Tokens to the extent they do not represent equity would neither through storage nor through trade trigger any AML. If Tokens represent equity exchanges and storage services would have to establish the identity of the user and the ultimate beneficiary in order to comply with AML.

* 1. **MiFID, Prospectus**
     1. **Tokens**

The legislation would not apply on Tokens if they do not represent equity.

*Legal Background:* According to the German Federal Financial Supervisory Authority (Bundesfinanzdienstleistungsaufsicht, BaFin) Bitcoin and virtual currency shall be considered a “financial instrument” pursuant to the German Credit Act (Kreditwesengesetz, KWG) (as also set forth in MiFID), whereas, in particular, the trading of virtual currency shall be subject to a specific permission under KWG. Therefore, mining-pools and specific trading activities may be subject to the provisions of the KWG and might require a legal permission and authorization by BaFin. The use of virtual currency in form of offering online wallets and mining is not subject to any specific permission under German law.

* + 1. **ICOs**

Only in case tokens are issued with equity rights related to entities MiFID would apply on ICOs

1. Would the regulatory or tax treatment of Tokens differ from the treatment of Cryptocurrency in your jurisdiction?

NO

1. Does your jurisdiction have any specific legislation or public policy on ICOs?

YES

German federal financial supervisory authority appears to be rather constructive and supportive regarding ICO and/or cryptocurrencies. However, it has yet not published any official position. The president of the German central federal Bank (Bundesbank) has in a statement that has explicitly been marked as “personal” warned that in his view cryptocurrencies that are not controlled by banks would increase risk and extent of any banking crisis.

## 9.3 Questionnaire Estonia



1. **Does your jurisdiction have any specific legislation on Cryptocurrency?**

NO

2. **Does your jurisdiction have any specific legislation on Tokens and/or ICOs?**

NO

3. **Have the authorities in your jurisdiction (e.g. the financial regulator) adopted any position or implemented any policy on Tokens and/or ICOs?**

YES

While no official policies or other guidance documents have been adopted in Estonia the Financial Supervision Authority(FCA) has on 6 June 2017 issued a notification warning the potential clients and investors that an entity contemplating establishment of a blockchain-based bank and arranging an ICO crowdfunding for that purpose does not hold licence issued by the FCA including the provision of investment services, banking services, e-money services or payment services and therefore is not authorised to provide investment, banking or payment services in Estonia. It was also announced that that the said entity has not registered any public offering prospectus regarding the token offering carried out through web page www.polybius.io.

4. **How would the law in your jurisdiction that implements the following EU legislation apply to (i) Cryptocurrency, (ii) Tokens, (iii) ICOs?**

4.1. **PSD**

* **Cryptocurrency**

Payment services (PSD 2) - Directive (EU) 2015/2366 has not been adopted yet. Estonian Payment Institutions and E-money Institutions Act which is based on payment services directive 2007/64/EC does not specifically regulate cryptocurrency or tokens. Even though Estonian Payment Institutions and E-money Institutions Act does not clearly regulate the topics on cryptocurrency, there are no laws that forbid usage thereof.

* **Tokens**

Current laws of Estonia do not specifically regulate tokens. Even though Estonian Payment Institutions and E-money Institutions Act does not clearly regulate the topics on tokens, there are no laws that forbid usage thereof.

4.2. **EMD**

* **Cryptocurrency**

E-Money Directive (2009/110/EC) is adopted by the Estonian Payment Institutions and E-money Institutions Act. The act does not regulate cryptocurrency or tokens.

Even though the Payment Institutions and E-money Institutions Act does not specifically regulate the topics on cryptocurrency, there are no laws in place that forbid usage thereof.

According to the Law of Obligations Act, a monetary obligation may also be performed in some form other than cash if so agreed by the parties or if such form is used in the ordinary course of business at the place of payment. This basically means that cryptocurrency can be used to perform transactions if both parties have agreed thereon.

* **Tokens**

Current laws of Estonia do not specifically regulate tokens. Even though Estonian Payment Institutions and E-money Institutions Act does not clearly regulate the topics on tokens, there are no laws that forbid usage thereof.

4.3. **VAT Directive**

* **Cryptocurrency**

VAT Directive 2006/112/EC is implemented by the Value-Added Tax Act.

According to official interpretation of the Estonian authorities (Ministry of Finance as well as the Estonian Tax and Customs Board) which is based on the ruling C-264/14 of the European Court of Justice, VAT does not apply to the transactions with a cryptocurrency.

* **Tokens**

There are no specific VAT rules for tokens. Therefore, most likely the aforementioned regulation would apply to the tokens as well.

4.4. **AMLD**

* **Cryptocurrency**

The 4th Anti-Money Laundering Directive (2015/849) has not been implemented into Estonian law yet. A draft of the new Money Laundering and Terrorist Financing Prevention Act is currently being discussed in the Estonian Parliament. According to the draft available, the new act will define cryptocurrency, which means that the new act will more clearly apply to the transactions concerning cryptocurrency.

The current Money Laundering and Terrorist Financing Prevention Act does not specifically define cryptocurrency, but the act applies to any provider of services of alternative means of payment. The definition stipulated in the currently effective act is very wide, which is why it applies to transactions related to cryptocurrency as well as other alternative means of payment. This interpretation was also confirmed by the ruling of Estonian Supreme Court in April 2016.

* **Tokens**

As the current Money Laundering and Terrorist Financing Prevention Act is not specific and applies to any alternative means of payment, then it would most probably apply also to tokens.

4.5. **MiFID**

* **Tokens**

Directive on markets and financial instruments (MiFID II) 2014/65/EU has not been implemented into Estonian law yet.

Tokens might be considered as securities according to the definition set forth in the current Securities Market Act as well as in the Law of Obligations Act. However, there is no legal practice regarding this issue.

On the 6th June 2017, Estonian Financial Supervision Authority (FSA) warned clients and investors about the fact that crowdfunding company (Polybius Foundation) lacks activity license and that their prospectus regarding offering of tokens was not registered with the FSA. This might mean that tokens are subject to financial supervision, but currently we do not have any information regarding further actions by the FSA.

* **ICOs**

There is no specific regulation on ICOs.

4.6. **Prospectus Directive**

* **Tokens**

The prospectus directive 2003/71/EC has been implemented by the Estonian Securities Market Act. There is no official interpretation or legal practice on the public sale of tokens but as pointed out above, it cannot be ruled out that the public offering of tokens might potentially be subject to the Securities Market Act as well as to financial supervision.

* **ICOs**

There is no official interpretation or legal practice regarding ICOs, but as pointed out above ICOs might potentially be subject to the Securities Market Act as well as to financial supervision.

5. **Would the regulatory or tax treatment of Tokens differ from the treatment of Cryptocurrency in your jurisdiction?**

NO

We are not aware of any official position of any authority differentiating between the treatment of tokens and that of cryptocurrency. The unofficial opinion obtained from the Estonia Tax and Customs Board reassures that the treatment is similar.

6. **Does your jurisdiction have any specific legislation or public policy on ICOs?**

No other than the position of the Financial Supervisory Authority referred to under question No. 3 above.

## 

## 9.4 Questionnaire France



1. **Does your jurisdiction have any specific legislation on Cryptocurrency?**

NO, but…

Though cryptocurrencies are not subject to a specific legal framework under French law, the Banque de France (French central bank) as well as the Autorité de contrôle prudential et de résolution, “ACPR” (French banking supervisor) consider the conversion of Bitcoins into fiat money and vice versa a “payment service”, requiring a licence for the exercise of such activity from the ACPR.

2. **Does your jurisdiction have any specific legislation on Tokens and/or ICOs?**

NO

3. **Have the authorities in your jurisdiction (e.g. the financial regulator) adopted any position or implemented any policy on Tokens and/or ICOs?**

NO

4. **How would the law in your jurisdiction that implements the following EU legislation apply to (i) Cryptocurrency, (ii) Tokens, (iii) ICOs?**

4.1. **PSD**

* **Cryptocurrency**

(See question 1).

* **Tokens**

N/A

4.2. **EMD**

* **Cryptocurrency**

N/A

* **Tokens**

N/A

4.3. **VAT Directive**

* **Cryptocurrency**

N/A

* **Tokens**

N/A

4.4. **AMLD**

* **Cryptocurrency**

The ACPR has already warned the payment-services licenced companies that they shall set up AMLD measures in order to detect, when they act on behalf of third parties, any suspect conversion of Bitcoin into fiat money and vice versa.

* **Tokens**

N/A

4.5. **MiFID**

* Tokens

N/A

* **ICOs**

N/A

4.6. **Prospectus Directive**

* **Tokens**

N/A

* **ICOs**

N/A

5. **Would the regulatory or tax treatment of Tokens differ from the treatment of Cryptocurrency in your jurisdiction?**

NO

6. **Does your jurisdiction have any specific legislation or public policy on ICOs?**

NO

## 9.5 Questionnaire Malta



1. **Does your jurisdiction have any specific legislation on Cryptocurrency?**

NO

2. **Does your jurisdiction have any specific legislation on Tokens and/or ICOs?**

NO

3. **Have the authorities in your jurisdiction (e.g. the financial regulator) adopted any position or implemented any policy on Tokens and/or ICOs?**

NO

4. **How would the law in your jurisdiction that implements the following EU legislation apply to (i) Cryptocurrency, (ii) Tokens, (iii) ICOs?**

4.1.**PSD**

* **Cryptocurrency**

The existing legislation does not allow for PSPs to provide services relating to cryptocurrencies.

* **Tokens**

The existing legislation does not cater for Tokens.

4.2. **EMD**

* **Cryptocurrency**

The existing legislation does not allow for EMIs to provide services relating to cryptocurrencies.

* **Tokens**

The existing legislation does not cater for Tokens.

4.3.**VAT Directive**

* **Cryptocurrency**

The existing legislation does not specifically cater for cryptocurrencies. We are aware that there is ECJ case-law on this matter and we would expect this to be taken into consideration.

* **Tokens**

The existing legislation does not specifically cater for tokens.

4.4 **AMLD**

* **Cryptocurrency**

The existing legislation does not specifically cater for cryptocurrencies although we are aware that EU Directives in this area will include cryptocurrency exchanges within the remit of AML legislation.

* **Tokens**

The existing legislation does not specifically cater for tokens.

4.5. **MiFID**

* **Tokens**

The existing legislation does not specifically cater for tokens.

* **ICOs**

The existing legislation does not specifically cater for ICOs.

4.6. **Prospectus Directive**

* **Tokens**

The existing legislation does not specifically cater for tokens.

* **ICOs**

The existing legislation does not specifically cater for ICOs.

5. **Would the regulatory or tax treatment of Tokens differ from the treatment of Cryptocurrency in your jurisdiction?**

We are not aware of any pronouncement by Maltese tax authorities on this matter.

6. **Does your jurisdiction have any specific legislation or public policy on ICOs?**

NO

## 9.6 Questionnaire Switzerland

MME_Byline_CMYK.jpg

1. **Does your jurisdiction have any specific legislation on Cryptocurrency?**

NO

2. **Does your jurisdiction have any specific legislation on Tokens and/or ICOs?**

NO

3. **Have the authorities in your jurisdiction (e.g. the financial regulator) adopted any position or implemented any policy on Tokens and/or ICOs?**

YES

Apply general AML regulations. No license needed if no financial intermediary function / no exchange function.

Wallet provider are subject to AML regulations, but are not qualified as a bank.

BTC is qualified as currency for VAT purposes.

4. **How would the law in your jurisdiction that implements the following EU legislation apply to (i) Cryptocurrency, (ii) Tokens, (iii) ICOs?**

N/A

5. **Would the regulatory or tax treatment of Tokens differ from the treatment of Cryptocurrency in your jurisdiction?**

YES

Depends on the functionality of the tokens. Depending on associated rights, tokens can be qualified as equity, debt, sale of rights, donation, loyalty points, in-game tokens, etc. Hence, tax treatment follows this qualification. Thus, creation of tokens could be subject to stamp duty, sale of tokens could be subject to VAT or dividends could be subject to WHT.

6. **Does your jurisdiction have any specific legislation or public policy on ICOs?**

YES

See above, point 3. General AML regulations apply.

## 9.7 Questionnaire UK



1. **Does your jurisdiction have any specific legislation on Cryptocurrency?**

NO

2. **Does your jurisdiction have any specific legislation on Tokens and/or ICOs?**

NO

3. **Have the authorities in your jurisdiction (e.g. the financial regulator) adopted any position or implemented any policy on Tokens and/or ICOs?**

YES

Historically, the FCA has generally taken a ‘technology neutral’ policy approach to regulating financial services that is:

* not to regulate specific technology types like blockchain, only the activities they facilitate and the firms carrying out these activities so as to;
* accommodate innovation but avoid arbitrage and unfair competition between emerging technologies.

At the same time the FCA has a competition objective to encourage greater competition and innovation in financial services (*Innovate Initiative*) by removing barriers to entry where desirable and possible, through clarifying regulatory expectations and examining/changing the FCA’s own rules and processes and by providing a test environment (*The Regulatory Sandbox*) for the most innovative ideas allowing businesses to test innovative products, services, business models and delivery mechanisms.

Through these various mechanisms the FCA is actively supporting a variety of blockchain solutions which are being deployed in UK regulated financial services and is currently considering (through consolation) whether FCA rules prevent or restrict sensible developments in blockchain applications that would benefit consumers and hence whether changes to FCA rules may be needed.

The FCA has wide and powers to make such rule changes although there are certain regulatory changes which would require amendment of legislation, and therefore, need the involvement of HM Treasury - such as changes to the Financial Services and Markets Act 2000, or the Financial Services and Markets Act 2000 (Regulated Activities) Order 2001.

The FCA is also working with overseas regulators and standard setting agencies on collaborative initiatives and reports relating to cross-border applications of blockchain.

4. **How would the law in your jurisdiction that implements the following EU legislation apply to (i) Cryptocurrency, (ii) Tokens, (iii) ICOs?**

4.1. **PSD**

* **Cryptocurrency**

The UK Payment Services Regulations 2009 (PSR) implemented PSD and is fundamentally concerned with the regulation of funds transfers (funds being banknotes and coins for example in sterling or other fiat money or scriptural money being the equivalent of such physical banknotes or coins held on account for example a sterling or euro balance in a bank account).

In that regard Cryptocurrency does display key characteristics associated with the key functions of funds (fiat money) in that Cryptocurrency can be used (amongst other things) to make and receive payments between users who retain Cryptocurrency or use it in connection with other payments accepted in Cryptocurrency.

However unlike fiat money Cryptocurrency has an entirely intrinsic market value in its own right which can fluctuate independently of the value of a fiat currency. In addition and in contrast to fiat money there is no readily identifiable issuing party from which Cryptocurrency can be bought or against which users of Cryptocurrency would have a claim. Accordingly and because of the peer to peer creation and characteristics of Cryptocurrency and the absence of these features of fiat currency Cryptocurrency is not regarded as falling outside the perimeter of the PSR.

* **Tokens**

Other types of virtual currency including tokens may fall within the scope of the PSR if they can be traded, purchased or exchanged to and from fiat currency and are linked or backed by fiat currency in some way.

It is possible for a Payment Institution authorised under the PSR to be carrying out tokens (or cryptocurrency) transactions separately from providing payment services in fiat currency in which case (and depending on how the business is structured) the Payment Institution is not required by the PSRs to safeguard funds received for the purpose of these transactions and where a Payment institution is using the segregation method of safeguarding such transaction funds will need to be kept separate from payment service funds as they are not relevant funds for safeguarding measures.

If once the tokens (or cryptocurrency) transaction has taken place, the Payment Institution is then to pay the proceeds of the transaction in fiat currency on to a third party then this amounts to a payment service and the proceeds becomes relevant funds to be safeguarded as soon as received by the Payment Institution.

* 1. **EMD**
     1. **Cryptocurrency**

The UK Electronic Money Regulations 2011(EMR) implemented the second Electronic Money Directive in the UK and (for the reasons outlined above in relation to PSD) cryptocurrency would appear to fall outside its scope.

* + 1. **Tokens**

Other types of virtual currency including tokens may fall within the scope of the EMR if they can be traded, purchased or exchanged to and from fiat currency and are linked or backed by fiat currency in some way.

* 1. **VAT Directive**
     1. **Cryptocurrency**

The UK tax authority (HM Revenue and Customs, or “HMRC”) published guidance in 2014 in relation to the tax treatment of income received from, and charges made in connection with, activities involving cryptocurrencies. It should be noted that the guidance is provisional and can only be relied upon until HMRC announces any changes (which it has yet to do so).

The key points to note are that:

* Income from cryptocurrency mining would generally be outside the scope of VAT on the grounds that mining does not constitute an economic activity. Income received by miners for other activities will be exempt from VAT.
* No VAT will be due when cryptocurrencies are exchanged for other currencies.
* VAT will be due in the normal way when cryptocurrencies are used to buy goods or services. The value of the supply will be equal to the sterling value of cryptocurrencies when the supply occurs.
* Charges that are over and above the value of the cryptocurrencies for arranging or carrying out any transactions in cryptocurrencies will be exempt from VAT.
  + 1. **Tokens**

HMRC has not issued any formal guidance and there is no specific UK VAT legislation regarding the taxation of Tokens. This would need to be assessed on a case by case basis with reference to the particular characteristics of the Tokens in question.

* 1. **AMLD**
     1. **Cryptocurrency**

Cryptocurrency is not currently governed by the Money Laundering Regulations 2007, which implement the EU legislation relating to anti-money laundering. The UK Government has said that it will consult on how best to bring virtual currencies within the scope of UK legislation implementing the EU Money Laundering Directives. It has not given a definition of ‘virtual currencies’ so it is not yet clear whether all cryptocurrency will be covered by UK legislation relating to anti-money laundering, although it will be necessary to regulate virtual currency exchange platforms and custodian wallet providers in accordance with the Fifth Money Laundering Directive. The UK Government has not yet published draft legislative proposals to implement the Fifth Money Laundering Directive.

* + 1. **Tokens**

Tokens are not currently governed by the Money Laundering Regulations 2007, which implement the EU legislation relating to anti-money laundering. The UK Government has said that it will consult on how best to bring virtual currencies within the scope of UK legislation implementing the EU Money Laundering Directives. It has not given a definition of ‘virtual currencies’ so it is not yet clear whether tokens will be brought within the scope of anti-money laundering legislation in the UK. The UK Government has not yet published draft legislative proposals to implement the Fifth Money Laundering Directive.

* 1. **MiFID**
     1. **Tokens**

Much of the UK implementation of MIFID was done directly through amendments to what are now the FCA rules which refers back to legislation, including the Financial Services and Markets Act 2000 (Regulated Activities) Order 2001(as amended) which (amongst other things) set out a list of the investments activities by reference to specified investments that are defined as regulated activities :requiring specific permissions and authorisation from the FCA.

The fundamental issue to be determined in relation to any particular token is how it is structured and in particular whether there is an identifiable issuing party from which the tokens can be purchased or against which holders of the tokens would have a claim - in the same way as typical specified investments such as securities like shares, debentures and warrants which are structured with an issuer.

It also possible that under a structure whereby tokens are packaged - for example into financial products such as options, futures or other derivative contracts - then those financial products would then be regulated as specified investments giving rise to regulated investments activities.

* + 1. **ICOs**

Potential FCA policy issues has been identified in relation to businesses using ICOs to fund themselves and potential issues around blockchain’s compatibility with the existing UK regulatory framework as regards various parallels with initial public offerings, private placement of securities or crowd funding sales and therefore a ICO may (depending on how the particular ICO is structured) fall into the UK’s MIFID regime.

* 1. **Prospectus Directive**
     1. **Tokens**

The law in the UK that implements the Prospectus Directive has no special application to tokens.

* + 1. [**ICOs**

The law in the UK that implements the Prospectus Directive has no special application to ICOs

1. **Would the regulatory or tax treatment of Tokens differ from the treatment of Cryptocurrency in your jurisdiction?**

HMRC has not issued any formal guidance and there is no specific UK tax legislation regarding the taxation of Tokens. This would need to be assessed on a case by case basis with reference to the particular characteristics of the Tokens in question. The tax treatment may therefore differ from the tax treatment of Cryptocurrency [max. 250 words]

1. **Does your jurisdiction have any specific legislation or public policy on ICOs?**

FCA rules are based on a policy of technology neutrality and typically designed to regulate outcomes rather than specific new processes or technology (see also 3 above).

However the FCA have recently questioned whether some of its rules may assume/ presuppose technology types and business models other than those which blockchain facilitates and whether these latent assumptions may give rise to unintended/unknown regulatory barriers to desirable blockchain innovations which barriers need to be addressed.

This policy issue has been identified arises across a variety of blockchain applications and specifically in relation to businesses using ICOs to fund themselves and potential issues around blockchain ’s compatibility with the existing UK regulatory framework.

This has caused the FCA to ask in its recent consultation the specific question *What legal and regulatory challenges do firms find in fitting initial coin offerings into our (the FCA’s) regulatory framework ?*

There are in particular potential regulatory issues around the classification of proprietary tokens in this context .Start-ups in the blockchain space have used ICOs to raise capital at early stages of their development issuing their own proprietary cryptographically secured DLT tokens which give investors the opportunity to realise capital growth. If the start-up manages to issue sufficient tokens, digital currency exchanges may make a market in these tokens with secondary trading and this activity has various parallels with initial public offerings, private placement of securities or crowd funding sales and therefore may (depending on how the particular ICO is structured) fall into the UK regulatory perimeter.

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30. But then again, the ECJ clearly states that whether a (non-traditional) currency is acceptable as an alternative to legal tender is (solely) to be determined by the parties involved in the transaction. Consequently, Bitcoin might serve as that alternative once two parties agree on that. Nevertheless, the purpose of payment is even more obvious with crypto tokens which have a connection to a specific service. [↑](#footnote-ref-29)
31. Currency and Foreign Transactions Reporting Act (1970) including amendments by the USA PATRIOT Act [↑](#footnote-ref-30)
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