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Cryptocurrency and its taxation

BACHELOR THESIS

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DECLARATION OF HONOUR:

I declare that this thesis is my own work, and that all references to, or quotations from, the work of others are fully and correctly cited.

(Signed)

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ABSTRACT

Since 2008, the emergence of the cryptocurrency market has had a considerable influence on the financial sector and the economy as a whole, including the rise of blockchain technology and the production and presence of new types and numbers of cryptocurrencies. Many researchers recognize the significance and benefits of the cryptocurrency market for the global economic system; however, global economies are less welcoming because blockchain technology allows cryptocurrency to remain unregulated by regulators due to its high anonymity and decentralization, potentially leading to increased opportunities for illegal money circulation. Regulators across the world are discussing whether and how to regulate cryptocurrencies. As a result, it is necessary to go more into this topic, evaluating current taxes and security rules in order to identify potential legislative difficulties and prescribe a plan of action. Currently, the legal framework is insufficient to solve all of bitcoin's challenges, and it does not control all aspects of cryptocurrency transactions and activities. The present legislative framework is unable to deal with the anonymity and decentralization of cryptocurrencies, resulting in their revelation.

Keywords: Cryptocurrency, Taxation, tax evasion, law, European Union, World, anonymity.

SUMMARY

Most countries already have some level of regulation on cryptocurrencies, such as taxation rules and anti-money laundering/counter-terrorism laws, which together will regulate cryptocurrency usage in order to prevent illegal money circulation and provide a legislative framework for citizens to use cryptocurrency legally. The majority of the examined national legislation identifies cryptocurrencies as "property," with exceptions where the coin is classified as "currency." Taxes policies apply both direct and indirect taxation of cryptocurrencies, including "mining" activities, however there are differences that contribute to legislative fragmentation, resulting in inconsistencies and the likelihood of tax frauds such as tax evasion and money laundering.

The majority of EU regulations on tax offenses lack a precise and explicit description of crypto-assets within their scope, resulting in their exclusion from the framework. Such an issue raises the topic of crypto-asset regulation, potentially opening the door to tax evasion and money laundering. Furthermore, the Directives do not cover a major portion of critical actors in the crypto-scheme, who may be complicit in tax offences, and hence are unable to effectively counteract the decentralization and anonymity of crypto-asset transactions.

The anomalies caused by the fragmentation of taxation regulations at the national level make cross-border transactions and the lawful usage of crypto-assets by consumers more complex.

As a result, existing law must be amended to include the missing parties within the scope of Directives. In addition, lawmakers must design a uniform national and cross-border legislation to reduce inconsistencies in definitions and relevant regulations among states, as well as to promote healthy competition, ease of use of crypto-assets, and market integrity. Finally, uniform transparency and disclosure regulations will make it feasible to successfully tackle unlawful money laundering.

For the same purpose, it would be advantageous to construct and develop a decentralized crypto-scheme intermediary, promoting it as a non-governmental institution of cryptocurrency participants for maintaining the protocol's and transaction register's integrity.

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1. INTRODUCTION

1.1 Background of the problem

Since 2008, the world has changed dramatically; specifically, since October 2008, a new branch of technological development has emerged, which has had a significant impact on the financial industry and the economy as a whole. Due to the global financial crisis and the systemic failures that resulted, public confidence in the traditional monetary system began to erode, leading to an increase in the popularity of alternative currency exchange methods (in this case, cryptocurrencies), which have since become a new part and era of the global economy. The Blockchain technology gained popularity in 2008 after a public ledger of Bitcoin cryptocurrency transactions appeared. BTC became the first truly decentralized currency when blockchain technology was added to it.

First, the anonymity and decentralization of this cryptocurrency, as well as more freedom and lower commissions compared to traditional payment channels, sparked public attention.¹ As a result, the cryptocurrency market grew swiftly, driven by bitcoin, which spawned other, essentially identical cryptocurrencies like Ethereum.

Although many researchers recognize the importance and benefits of the cryptocurrency market for the global economic system, most economies are not hospitable to alternative monetary systems, and regulators are issuing rules to limit transactions and the trade of cryptocurrencies. This mindset is usually caused by anonymity, which can lead to increased opportunities for illegal circulation of funds (money laundering, tax evasion or financing of terrorism). Furthermore, as the crypto business grows and the number of cryptocurrencies (uncontrolled money) grows,

¹ Leela Joshi , '*BITCOIN : REAL OR VIRTUAL CURRENCY*' (International Journal of Recent Scientific Research) , 28 December 2017 , Available on <http://www.recentscientific.com/>

governments throughout the world are paying closer attention to this market.² With a market capitalization of 206.65 billion dollars on November 8, 2017, it reached an all-time high of 3,048.57 billion dollars on November 10, 2021³, a 1375 percent increase.

With such rapid adoption, officials worldwide are discussing whether or not to regulate cryptocurrencies. Despite the fact that there is no apparent remedy, there are strong reasons to regulate and pay special attention to them. Because cryptocurrencies markets are unpredictable and anonymous, they are susceptible to speculators and abuses like money laundering and tax evasion. Various procedures are already in place to protect against probable tax evasion and cybercrime involving cryptocurrency. Because of this, the purpose of this study is to assess all present regulatory and state security measures and identify possible next steps as the crypto market grows in importance.

1.2 Background of the study

Since cryptocurrencies are a huge topic, given that the cryptocurrency market includes at least several thousand cryptocurrencies, and the blockchain underlying the technology of cryptocurrencies is also applicable in many different technologies indirectly related to cryptocurrencies, the author implies that the study will be given a precise framework, aiming to reduce the scope of the research and make it as relevant and targeted as feasible. It will be limited to two of the most popular cryptocurrencies (Ethereum and Bitcoin) because the author believes that this is the most efficient and sensible method. The study will also affect blockchain technology in that it is required to understand how cryptocurrencies work. Thus, blockchain technology will only be considered in the settings indicated. Notable exceptions include tokens, crypto-currency securities, and other non-crypto assets. Given that the study's focus is on cryptocurrency and

² European Parliament, Directorate-General for Internal Policies of the Union, A. Snyers, R. Houben “*Cryptocurrencies and blockchain : legal context and implications for financial crime, money laundering and tax evasion*” (European Parliament, 2018) , Available on : <https://data.europa.eu/doi/10.2861/280969> ;

³*Overall cryptocurrency market capitalization per week from July 2010 to February 2022* <https://www.statista.com/statistics/730876/cryptocurrency-maket-value/>

blockchain legal issues, it is likely that the study will not cover all technical aspects of the topic, only those required to grasp the legal implications.

The author also considers the legal context of financial crimes like money laundering and tax evasion. In this context, the author intends to research and assess all conceivable issues raised by cryptocurrency and the blockchain system, as well as issues raised by current and future solutions to difficulties.

Also, for comparative analysis, different jurisdictions will be studied in order to study in more detail possible approaches to this topic in different countries, and possibly study their effectiveness.

To further understand the issue, the study first defines cryptocurrencies and blockchain. Following that, research of the two most popular cryptocurrencies with the greatest market capitalizations will be conducted. This analysis is supposed to provide a springboard for further research into the current and future legal systems. Because the study is based on qualitative data, there is no definitive solution. As a result, it's important to remember that the authors' perceptions and involvement may have an impact on the outcomes.

Aside from existing legislation, the research will examine at scholarly sources that will help interpret existing legislation from other jurisdictions, such as the EU, the US, and El Salvador (the only government to completely recognize cryptocurrency as a payment method). The resources will cover existing legislation (reports, views, etc.) on cryptocurrency taxation, tax evasion, and anti-money laundering. The content will also include information on cryptocurrencies and blockchain technology, as well as some technical details required to comprehend the topic.

The author views this study's objective to be gaining a better understanding of cryptocurrencies and its taxation. The topic is vital in today's reality, as the market for cryptocurrencies continues to grow without noticeable change, making the study timely, as the usage of cryptocurrencies in everyday life is growing, but they are still not fully understood.

The study suggests the following questions to which it must answer:

- What are the current tax rules on cryptocurrencies?
- How it could be taxed on future?

The author assumes at this stage of the study the following hypothesis regarding the research question:

- The existing legal framework is not sufficient to solve all problems with cryptocurrency and does not control all aspects of transactions and other actions with it. The key disadvantage associated with cryptocurrency transactions is its anonymity, which, according to the author, prevents their proper monitoring, for the most part allowing shadow transactions to be carried out outside the regulatory field, as well as creating a problem of tax evasion. The existing regulatory framework does not have the ability to deal with the anonymity of such transactions, revealing its anonymity.

2. WHAT IS CRYPTOCURRENCY

2.1 Origins

Virtual money has been popular at various times throughout human history, in various forms, but with the same goal in mind: As a substitute for cash while maintaining practical anonymity and secrecy, virtual money offers the same security and convenience as banks and credit cards. Given that cash is a relatively anonymous money, but it has a sufficient number of flaws, such as the fact that it is a "physically tangible" money that is subject to loss or wear, and that money entrusted to financial institutions is actually unprotected / vulnerable to the same financial institutions, government, etc. Virtual money has been popular for a long time, before

being supplanted by "real" monetary alternatives, then replaced again by virtual money.⁴ The anonymous encrypted electronic money "ecash" was invented in 1983 by the American cryptographer David Chaum. Unlike existing cryptocurrencies, they were still tied to authorities but did not allow the government or bank to track the transaction.⁵

Wei Dai's "b-money" was designed in 1998 with the intention of replacing "ecash" as an electronic payment system.⁶ It was the first successful attempt to replace central authorities with protocols in a cryptographic system. In other words, it was based on an anonymous peer-to-peer payment mechanism akin to today's cryptocurrencies.

However, the fully anonymous peer-to-peer system was created only in 2009 as Author mentioned before, by inventing the most popular today's cryptocurrency – Bitcoin, which popularity grew monstrously and become a new era of currencies.

2.2 Blockchain-operational mechanism

Blockchain is a distributed transaction system database in which computers, referred to as nodes, collaborate to create a worldwide network and system for storing encrypted sequences of bits or information as a single unit or block so called "DLT" technology (distributed ledger technology). DLT generally means a collection of digital data that has been copied, exchanged, and synced across various places, nations, or institutions.⁷ Unlike the centralized system, which are limited to governmental and bank authorities, such system has not any central administrator so is anonymous. Generally, it operating as collectively maintained system where control is

⁴ David Graeber "*Debt: the first 5,000 years*" (Melville House Publishing, May 2011) , pp 17-18.

⁵ David Chaum "*Blind Signatures for untraceable payments*" (University of California) , pp 1 , Available on <http://www.hit.bme.hu/~buttyan/courses/BMEVIHIM219/2009/Chaum.BlindSigForPayment.1982.PDF>

⁶ Wei Dai "*b-money*" Available on <http://www.weidai.com/bmoney.txt> , Accessed March 16, 2022

⁷ Report of Government Office for Science "*Distributed Ledger Technology : beyond block chain*" (January 2016), pp5 , Available on https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/492972/gs-16-1-distributed-ledger-technology.pdf

distributed of network of computer servers (also called “nodes”).⁸ The technology uses cryptographic encryption methods with specific mathematical algorithms which creates and build and test an ever-expanding data structure. The blockchain network as any other system has its own rules (generally set by the administrator) without which the node cannot be appointed to such network. However, unlike other systems, the administrator does not control the transactions itself. Also, sometimes, participation in this system as a "node"⁹ may not be subject to any rules but is limited only by the condition of using the corresponding software. The structure implies only adding data to it, not deleting it, i.e., forming chains of "blocks of transactions", serving the function of a ledger.¹⁰

Blockchain technology allows to cover a large number of different actions / functions and systems, and can also be used for different purposes. Essentially, systems, as the author said earlier, can be divided into 2 groups: - systems that are open, that do not require administrator permission (“permissionless”); or - systems, to which only users assigned (allowed) by the administrator have access.

For the first group of systems, the only thing required to connect to the system is a computer device with the appropriate software. Such systems are most often the Cryptocurrencies further discussed in this research, such as Bitcoin, Litecoin and others. This kind of system does not require a central owner of the network, and copies of the registry are distributed to all network nodes in an identical version.

The second group on the contrary, functioning only with permission of a central administrator, only with which permission the node can join the network. Such approach means in general that the identity of node could be checked and viewed. Therefore, all such network participants are

⁸ World Bank Group , “*Distributed Ledger Technology (DLT) and blockchain, FinTech note, no.1.*” (2017) pp.5 , Available on <https://documents1.worldbank.org/curated/en/177911513714062215/pdf/122140-WP-PUBLIC-Distributed-Ledger-Technology-and-Blockchain-Fintech-Notes.pdf>

⁹ In the context of blockchain, nodes are network members or stakeholders who are assigned to store a copy of the DLT and act as communication hubs for the network's fundamental tasks. The nodes of a Proof-of-Work blockchain are the network's miners.

¹⁰ Supra note 7 pp.1

required to trust the central administrator as a central controlling entity to select genuine network nodes or sometimes it can vary for that already existing participants can decide on the entrance of future nodes. However, it also shall be noted that such networks could be divided as ones with less control, i.e. where any node can get access to network without permission to transactions, as the for the generation of the transactions and ledger update the meant before permission is required, and “enterprise” permissioned blockchain¹¹ where only the administrator can appoint new participants, generate new transactions and update the ledger. This kind of systems, more precisely with less control of administrator, are used for example by “Ripple” cryptocurrency¹². But as the Author already noted, in both groups of networks (Open and closed ones) the transactions are not under the control of the administrator or any other trusted third party.

So, in accordance with mentioned before, it is possible to conclude that the blockchain could be named as database in encrypted form containing distributed all sorts of information, in other words “blocks” of information. The data (block) is initiated with one of the participants of the network (whether it can be an ordinary node, or administrator) and are transferred to all other participants of network without any open public details of transaction as it is encrypted. The validity of such a block is established collectively by all network users using a pre-defined algorithmic validation approach known as a consensus mechanism.¹³ As a block is successfully validated, it is added to the blockchain system, which updates the network's transaction ledger. The work of such system is illustrated forward in Figure 2.1.

¹¹ Praveen Jayachandran “*The difference between public and private blockchain*” (IBM Supply and Blockchain Blog , May 31, 2017) , accessed March 17, 2022, Available on <https://www.ibm.com/blogs/blockchain/2017/05/the-difference-between-public-and-private-blockchain/>

¹² European Parliament, Directorate-General for Internal Policies of the Union, A. Snyers, R. Houben “*Cryptocurrencies and blockchain : legal context and implications for financial crime, money laundering and tax evasion*” (European Parliament, 2018) pp 16 , Available on : <https://data.europa.eu/doi/10.2861/280969> ;

¹³ World Bank Group , “*Distributed Ledger Technology (DLT) and blockchain, FinTech note, no.1.*” (2017) pp.1 , Available on <https://documents1.worldbank.org/curated/en/177911513714062215/pdf/122140-WP-PUBLIC-Distributed-Ledger-Technology-and-Blockchain-Fintech-Notes.pdf>

HOW A BLOCKCHAIN WORKS

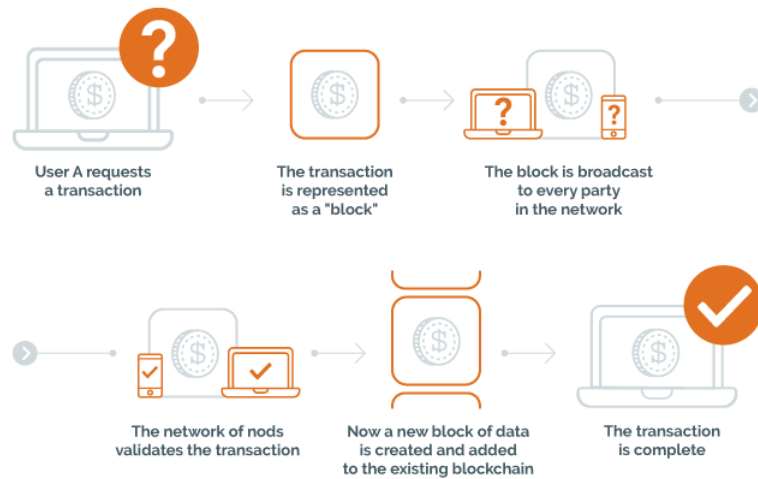


Figure 2.1. How Blockchain works. Source: BLOCKCHAIN, CRYPTOCURRENCY AND BITCOIN - Scientific Figure on ResearchGate. Available from: [https://www.researchgate.net/figure/figure-1-How-Blockchain-Technology-works_fig1_334279715](https://www.researchgate.net/figure/figure/figure-1-How-Blockchain-Technology-works_fig1_334279715) , Accessed on March 18, 2022

Therefore, it could be argued that the blockchain mechanism remove the intermediate party in broad specter of transactions¹⁴, which without blockchain technology need to be conducted with intermediation of bank or other authorities, in the light that blockchain supposed to simplify it, including decentralization of trust and authentication of transactions. However, it also shall be noted that in case of networks controlled by administrator the central party of administrator still is needed in some extent. In other words, it can be argued that such a technology increases the

¹⁴ Pascal Witzig and Victoriya Salomon “Cutting out the middleman:A case study of blockchain-induced reconfigurations in the Swiss financial services industry” (The University of Neuchâtel , 2018) pp 5, Available on https://www.researchgate.net/publication/323906964_Cutting_out_the_middleman_a_case_study_of_blockchain-induced_reconfigurations_in_the_swiss_financial_services_industry

efficiency of making transactions. But it is also worth considering that technology can also lead to negative consequences. Given that an intermediary third party often acts as a protective measure against systemic risks, when excluded / replaced by a blockchain, it can lead to certain liquidity risks, which the intermediary provided to avoid.¹⁵

Separately, it is worth mentioning the stage (the stage shown in Fig. 2.1 - transaction verification), which is designed to verify the accuracy of the information added by the node. At this stage, in the case of cryptocurrencies, any transfer is registered, because otherwise, without registration and control, the same transaction could be translated more than once. In other words, the node at this stage reaches some agreement - a consensus to verify the addition of information.

Such a consensus mechanism is an important part of the entire chain and has its own varieties that are used in the context of cryptocurrencies - Proof of Work (PoW) and Proof of Stake (PoS)¹⁶.

The most common consensus method is the first one, as it is used in most known cryptocurrencies, including Bitcoin and Ethereum¹⁷. In essence, PoW involves solving certain cryptographic problems in order to add new blocks of information to the network. Given that the task consists of all the previously added information of other network participants, the solution of each subsequent task is more difficult than the previous ones, therefore, it requires large computing power (usually this means computer equipment). In simple words, this process is called "mining". The solution of the problem is a confirmation of the completion of the work, which leads to a certain reward for the network participant in the form of a cryptocurrency, which is an incentive for solving the following tasks.

¹⁵ Committee on Payments and Market Infrastructures “*Distributed ledger technology in payment, clearing and settlement-an analytical framework*” (Bank for International Settlements (BIS), 2017) pp 19, Available on <https://www.bis.org/cpmi/publ/d157.htm>

¹⁶ Report of Government Office for Science “*Distributed Ledger Technology : beyond block chain*” (January 2016), pp21 ,Available on https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/492972/gs-16-1-distributed-ledger-technology.pdf

¹⁷ Gervais, Arthur & Karame, Ghassan & Wüst, Karl & Glykantzis, Vasileios & Ritzdorf, Hubert & Capkun, Srdjan.. “*On the Security and Performance of Proof of Work Blockchains*” (2016) p. 2. Available on https://www.researchgate.net/publication/309451429_On_the_Security_and_Performance_of_Proof_of_Work_Blockchains

An alternative to the widely used mechanism was the PoS mechanism, which was supposed to get rid of the dependence on computer power, and thereby reduce the consumption of electricity.¹⁸ Under this mechanism, a node must prove ownership of an asset in order to participate in transaction verification. The mechanism is more proportional to the size of the network and the number of people in it. The larger the network, the smaller the reward will be for each, hence the node with a larger "share" will receive a larger amount of reward. Also, the amount of remuneration is affected by the experience of the node in this network. The system works similarly to the concept of a bank deposit, where you get a higher percentage for keeping a larger amount of money in storage.¹⁹ By creating a new "block" of information in the network, the conditional collateral is the coins (in cryptocurrency) of the forger. In the event of any fraudulent activity by the forger, all the coins staked on the card may be lost, as well as the share, etc.

It is also worth mentioning that these consensus mechanisms are not the only ones. There are other alternatives, including mechanisms such as Proof of Concepts (PoX), also designed to replace PoW, improving resource productivity, security, and incentives, as well as various hybrid mechanisms based on both PoW and PoS, while reducing high power consumption. An example of a hybrid consensus mechanism is Proof of Activity (PoA), which uses PoW to create empty blocks and PoS to validate blocks and add transactions.²⁰

¹⁸ Cong T. Nguyen, Dinh Thai Hoang, Diep N. Nguyen, Dusit Niyato, Huynh Tuong Nguyen, Eryk Dutkiewicz "Proof-of-Stake Consensus Mechanism for Future Blockchain Networks: Fundamentals, Applications and Opportunities" (IEEE Access, 2019) pp.4, Available on <https://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=8746079>

¹⁹ Husmeera Sheikh, Rahima Meer Azmathullah, Faiza Rizwan "Proof-of-Work Vs Proof-of-Stake: A Comparative Analysis and an Approach to Blockchain Consensus Mechanism" pp.787 (International Journal of Research in Applied Science & Engineering Technology (URASET), Available on www.ijraset.com)

²⁰ supra note 18. p.5

2.3 Concepts related to cryptocurrency

2.3.1 Definition

Cryptocurrencies (subset of Virtual Currencies) are described as a means of trade that operates as a currency in some instances but lacks all of the features of actual cash, according to a statement by the Director of the Financial Crimes Enforcement Network of the US Department of the Treasury.²¹ In essence such currency does not have any legal status of means of payment in any of jurisdictions, but is an alternative (substitute) of the ordinary monetary currency and has an equivalent value to it.

According to the International Monetary Fund (IMF) the Cryptocurrencies are privately issued by developers and denominated in their own unit of account virtual currencies representations of the value, including a large selection of different currencies such as IOUs , by issuers and other virtual currencies backed up by other assets, such as gold etc.²² A similar definition to the previous ones is also given by the European Central Bank (ECB), but giving a more precise division into subgroups. In accordance with Virtual Currency Schemes of 2012²³ , the virtual currencies (cryptocurrencies) are specified by 3 groups: 1) Closed virtual currency schemes; 2) Virtual currency schemes with unidirectional flow; 3) Virtual Currency schemes with bidirectional flow. First scheme is indicated as scheme that is used only in closed community in specific place, hence the currency does not have any realistic usage possibility in real life. Such scheme could be the best example by usage in computer games, where the users pay some subscription fees for entrance then “farming” the in-game currency, which can be spent only for

²¹ Statement of Jennifer Shasky Calvery. Director Financial Crimes Enforcement Network United States Department of the Treasury Before the United States Senate Committee on Banking, Housing, and Urban Affairs Subcommittee on National Security and International Trade and Finance Subcommittee on Economic Policy (Financial Crimes Enforcement Network, November 19 , 2013), Accessed March 22, 2022. Available on <https://www.fincen.gov/news/testimony/statement-jennifer-shasky-calvery-director-financial-crimes-enforcement-network>

²² IMF Staff Team “*Virtual Currencies and beyond: Initial Considerations*” (International Monetary Fund, January 2016) , Accessed March 22, 2022. Available on <https://www.imf.org/external/pubs/ft/sdn/2016/sdn1603.pdf>

²³ European Central Bank “*Virtual Currency Schemes*” , IV -Glossary, October 2012, Accessed March 22, 2022. Available on <https://www.ecb.europa.eu/pub/pdf/other/virtualcurrencyschemes201210en.pdf>

in-game (virtual) goods and services (usage of such virtual currency in real life most probably is forbidden by terms and conditions of game developer). Second group said as the currency which can be only bought for real currency but cannot be exchanged back. The conversion of such virtual currency is done under the terms and conditions of such scheme owner, generally allowing to user to buy both virtual goods and services using virtual currency, and also sometimes the real ones. Third group explained as slightly similar to second one, with only one significant difference, the conversion transactions can be done in two ways – from virtual currency to real one and in opposite. The conversion is done based on the exchange rates of the currencies. Latter scheme, as it is more adapted for usage in real life since have bidirectional flow, is mostly used as Cryptocurrencies, including Bitcoin and Ethereum.

The World Bank acknowledges the cryptocurrencies as a subset of digital currencies that obtain consensus through cryptographic procedures.²⁴ In general, such a definition is no different from the others previously listed, but the important thing is that, unlike other bodies, the World Bank notes the fact that any cryptocurrency relies on cryptographic methods / solving cryptographic problems, which is cornerstone of any functioning cryptocurrency.

The European Union Anti-Money Laundering Directive (AMLD) also gives the same definition of cryptocurrency, noting the following:

““Virtual currencies” are digital representations of value that are not issued or guaranteed by a central bank or government, are not necessarily linked to a legally established currency, and do not have legal status as currency or money but are accepted as a means of exchange by natural or legal persons and can be transferred, stored, and traded electronically.”²⁵

²⁴ Report of Government Office for Science “*Distributed Ledger Technology : beyond block chain*” (January 2016), pp21 ,Available on https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/492972/gs-16-1-distributed-ledger-technology.pdf

²⁵ Article 3.18., Directive (EU) 2018/843 of the European Parliament and of the Council of 30 May 2018, amending Directive (EU) 2015/849 on the prevention of the use of the financial system for the purposes of money laundering or terrorist financing , and amending Directive 2009/138/EC and 2013/36/EU, Accessed March 25, 2022 , Available on <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32018L0843>.

Also, the directive also specifically indicates the difference between electronic money and in-game currencies. The directive urges not to confuse these concepts, since these concepts have a different definition and application in essence.

Thus, it could be concluded that there is currently no entirely correct explanation of the term cryptocurrency, as all of the ones stated have very imprecise definitions. However, it might be argued that practically all institutions stress the same characteristics of cryptocurrencies, such as the fact that they are a subset of virtual currencies. To summarize, cryptocurrencies are a decentralized ("peer-to-peer") alternative payment method that has no legal standing, is not under the jurisdiction of any authority, is protected by cryptography (cryptographic methods), and may be transferred into other legal currencies and vice versa.

2.3.2 Users and other parties involved

Since cryptocurrencies are a specific manner of utilising Blockchain technology and consist of many different linking mechanisms (parties), a clear separation/definition of these parties, their functions, and influence should be provided.

The initial target group is the users. In essence, users of such technology and market are any natural or legal person who obtains and uses virtual currencies to acquire goods or services (both virtual and real) or to send money (peer-to-peer transactions) or holds them as an investment.²⁶ The way to get cryptocurrencies to perform the mentioned actions is a fairly extensive list of possible frauds, including: - buying a cryptocurrency through fiat money or another cryptocurrency through an exchange on an exchange; - Cryptocurrency mining using the available computing power of the available software, that is, in other words, participating in the network to solve cryptographic problems, receiving a reward for this (discussed in more detail earlier); - buying cryptocurrencies directly from another user through a trading platform or in a

²⁶ European Banking Authority (EBA) "*Opinion on "virtual currencies"*", July 4, 2014, Accessed March 25, 2022, Available on <https://www.eba.europa.eu/sites/default/documents/files/documents/10180/657547/81409b94-4222-45d7-ba3b-7deb5863ab57/EBA-Op-2014-08%20Opinion%20on%20Virtual%20Currencies.pdf?retry=1>

personal agreement ; - either by participating in the free distribution of the cryptocurrency at the time of its initial launch or as part of a crowdsale organized directly by the developer of the cryptocurrency to cover the costs spent during development²⁷; - accepting for the sale of goods or the provision of payment services in cryptocurrency; - either by receiving them as a gift or as a donation;

The second group is the miners. A miner is a person or group of people who contributes their processing capacity to process/validate blocks of transactions in a decentralized cryptocurrency network, in exchange for cryptocurrency currencies.²⁸ Miners are the key contributors to new cryptocurrency coinage. Mining usually refers to the PoW consensus mechanism. Aside from the payout for mining, miners can earn a fee for each transaction carried out in a transaction block, which provides another motivation to engage in mining and maintain the network.²⁹

A third party in the cryptocurrency market is a cryptocurrency exchange. An exchange is a natural or legal person that provides exchange services for users of a large number of coins against fiat currency or vice versa.³⁰ In essence, the Exchanges provide these services in exchange for a certain commission or charge. The exchanges function as a regular fiat money exchange, quoting the exchange rate for buying or selling virtual currencies in fiat money. These exchanges frequently accept payments in cash, bank transfers, and other virtual currencies. It's also worth noting that certain exchanges also operate as virtual wallet providers.³¹ Technically, this is the

²⁷ Eric Rosenberg , “*What Is a Cryptocurrency Crowdsale?*” (the balance , March 25.2022) , Accessed March 27.2022, Available on <https://www.thebalance.com/what-is-a-cryptocurrency-crowdsale-391277>.

²⁸ European Central Bank, supra note 22 , p.7.

²⁹ Jake Frankenfield, “*Bitcoin Mining*” (Investopedia, March 14, 2022) , Accessed March 27, 2022, Available in <https://www.investopedia.com/terms/b/bitcoin-mining.asp#:~:text=Bitcoin%20miners%20download%20the%20entire,miner%20receives%20a%20block%20reward.&text=Another%20incentive%20for%20bitcoin%20miners,the%20process%20is%20transaction%20fees>.

³⁰ European Parliament, Directorate-General for Internal Policies of the Union, A. Snyers, R. Houben , supra note 2, p.26

³¹ European Central Bank , supra note 22, p.8.

most straightforward method of obtaining and managing cryptocurrency assets, which may include taxable funds held by legal businesses or people.³²

It's also hard to ignore the role of virtual currency wallet providers. Such providers supply users with applications or other methods for storing and transferring virtual currency. Because it holds the user's private keys, such a wallet allows you to spend the virtual cash you've stored. These providers usually make it easier to engage in a virtual currency scheme by translating transaction history into a more readable and understandable format making it easier to use the system's fruits (perform transactions), and providing transaction security and coin storage.³³ According to the European Commission Staff Working Document, there are two types of wallet providers:³⁴ - *Software wallets providers* allow users to connect to the network and access public data from a distributed ledger by using their applications or programs; - *Custodial wallets providers* which contain the user's public and private key possession.

The fifth party is crypto-currency trading platforms, which also engage in crypto-currency exchanges or fiat currency trades. Unlike exchanges, which prefer to purchase and sell coins on a one-on-one basis, trading platforms serve as a conduit for users who wish to buy, sell, or swap cryptocurrencies for fiat currencies. Trading platforms, on the other hand, allow users to trade directly with one another providing only convenient platform. Generally, such systems are software-based, with no central transaction control authority.

In the market and technology of crypto-currencies, the final links are the developers who created the fundamentals of performance and use mechanisms for the cryptocurrency as well as those who offer it to users after its release (offers), either through a crowdsale (discussed earlier)

³² Anna Vaivade, “*Exploitation of cryptocurrencies as a tool for tax evasion: technological and regulatory issues*”, (Riga Graduate School of Law, 2020) p.18 , Accessed March 27 , 2022.

³³ Financial Action Task Force (FATF) report , “*Virtual Currencies , key Definitions and Potential AML/CFT Risks*), (June 2014) p.8 , Accessed March 27, 2022, Available on <http://www.fatf-gafi.org/media/fatf/documents/reports/Virtual-currency-key-definitions-and-potential-aml-cft-risks.pdf>

³⁴ European Commission , “*Commission Staff Working Document*” (European Commission, June 26, 2017) p. 85, Accessed March 27, 2022, Available on https://eur-lex.europa.eu/resource.html?uri=cellar:d4d7d30e-5a5a-11e7-954d-01aa75ed71a1.0001.02/DOC_1&format=PDF

or in other ways. Because this is outside the scope of the study, the author feels it is inappropriate to elaborate.

2.3.3 Differences of cryptocurrency's type – Bitcoin and Ethereum

Further research should include a conditional classification of the cryptocurrencies themselves, analyzing their similarities and differences. As stated previously, the study will focus on the two cryptocurrencies with the biggest market capitalization, Bitcoin and Ethereum. To better comprehend the probable differences and similarities of different cryptocurrencies, a quick informational explanation of each of the previously listed cryptocurrencies is provided below. Finally, all data will be summarized to make a final decision.

1. **Bitcoin** - a decentralized, anonymous virtual currency not controlled by any government or legal entity. Since the design of bitcoin entails preserving successful transaction details in a ledger,³⁵ anyone may check the chain, making party identification theoretically achievable with due diligence and combining the relevant facts (therefore anonymity may be in question). To put it simply, bitcoin is a hypothetical cryptographic "file" on any storage device or service, such as a digital wallet.³⁶ Because Bitcoin uses the PoW consensus mechanism, the main source of new Bitcoin currency is mining, which involves solving cryptographic puzzles using computer power provided by miners for a fee. The creator has established a limit of 21 million coins for the number of Bitcoin coins that may be mined through mining. This is because the system is designed to reward high mining capacity with decreasing payouts until there are no more coins left. This eliminates the possibility of value being emitted by a government authority, making the currency

³⁵ Lam, Pak Nian, "*Bitcoin in Singapore: A Light- Touch Approach to Regulation*" (April 11, 2014) p.14 , Accessed March 28, 2022 , Available on <https://ssrn.com/abstract=2427626>

³⁶ Kaplanov Nikolei "*Nerdy Money : Bitcoin, the Private Digital Currency, and the Case Against Its Regulation*" (Temple University Legal Studies Research Paper, March 31,2012) p.4 , Accessed March 28, 2022 , Available on <https://ssrn.com/abstract=2115203>

very volatile.³⁷ Furthermore, as the author previously stated, Bitcoin is a perfect example of an open network in which anybody may join without requiring permission from a central authority.

Assuming all of the above is considered together, the following points may be made:

- 1) Bitcoin is an open decentralized system,
- 2) a means of trade, and
- 3) a conditionally anonymous currency
- 4) that may be exchanged into fiat currencies and vice versa
- 5) working based on Proof-of-Work mechanism.

2. **Ethereum** – a decentralized platform that differs from other cryptocurrencies such as Bitcoin in that it supports a technology known as "Smart Contracts"³⁸, which are self-executing contracts/applications that run without the possibility of downtime – always running, never going down, saving trading time and allowing users to program without the possibility of third-party intervention, fraud, etc.³⁹ The technology of Ethereum tends to be much more than only peer to peer payment system but in contrary the technology in essence is built with a possibility for any person to build an application on it basis with performance of different tasks.⁴⁰ Thus, it could be said that Ethereum is not a cryptocurrency per se. Nonetheless, Ethereum, like other blockchains (most likely open ones), requires a payment mechanism for its network nodes, necessitating some sort of on-chain value, the function of which is already performed by the cryptocurrency in the usual sense based on Ethereum – Ether. Ethereum is an open blockchain meaning that anyone can

³⁷ Ibid p. 8.

³⁸ Programs recorded on the blockchain run when preset circumstances are satisfied and are often used to execute agreements automatically.

³⁹ Saralees Nadarajah, Stephen Chan, Jeffrey Chu and Yuanyuan Zhang "Blockchain and Cryptocurrencies" (Journal of Risk and Financial Management, 2020) p.25, Accessed March 28, 2022, Available on <https://www.mdpi.com/1911-8074/13/10/227>

⁴⁰ EY, "IFRS: Accounting for crypto-assets" (2018) p. 4, Accessed March 30, 2022, Available on <https://eyfinancialservicesthoughtgallery.ie/wp-content/uploads/2018/03/EY-IFRS-Accounting-for-crypto-assets.pdf>

join without pre-approval. Despite the primary function, it also works as medium of exchange that could be changed to other currencies (both virtual and fiat ones).

Despite the fact that the Ethereum developers announced in 2018 that they aimed to progressively switch to a PoS mechanism⁴¹, Ethereum still utilizes the PoW method, which relies on miners' work in constructing new blocks of completed transactions.⁴² However, the “Beacon Chain”⁴³ project is still working on integrating PoS to Ethereum. In order to make Ethereum more secure, scalable, and long-lasting, the Beacon Chain attempts to integrate the current mining method with the newly developed PoS mechanism. A PoS staking system would compel miners to put their earnings into a PoS staking mechanism. As a result of the merger, Ethereum will use shard chains, which are database splits that share the burden and boost network capacity.

Therefore, assuming mentioned above it could be stated that Ethereum could be described as:

- 1) Ethereum is anonymous
- 2) open decentralized blockchain
- 3) that could be directly converted to other virtual and fiat currencies and vice versa
- 4) accepted as medium of exchange
- 5) currently working based on Proof-of-Work mechanism, however launched transition to Proof-of-Stake system.

To summary, both cryptocurrencies have many similarities, but also substantial differences. Bitcoin and Ethereum are both open permissionless, decentralized currency. Also, both cryptocurrencies are pseudo-anonymous because they record completed transactions in a

⁴¹ Ibid, p.4

⁴² See official website of ETH . (January 30, 2022) Accessed March 31, 2022. Available on <https://ethereum.org/en/developers/docs/consensus-mechanisms/>

⁴³ <https://ethereum.org/en/upgrades/beacon-chain/>

public ledger. Both currencies can be exchanged electronically for fiat and other virtual currencies and vice versa, but only Ethereum is offered by a known person or corporation.⁴⁴

Despite the fact that both currencies presently use the PoW mechanism, Ethereum is considering a shift to a separate PoS algorithm. Moreover, unlike Bitcoin, which was created primarily as a peer-to-peer electronic cash system, Ethereum was created as a multi-purpose system with its own ecosystem and platform, incorporating Smart Contracts technology.

This comparison is wanted to demonstrate and quantify the significant distinctions, which may be useful in future evaluations of cryptocurrency taxes and prospective rules. Because cryptocurrency development is generally a progressive technology (as shown by Ethereum's future aims), several highlights may change over time.

2.4 Main benefits and risks of cryptocurrency and its market

As stated previously, cryptocurrencies are getting more popular and are thus being used more frequently as a substitute for fiat currency. Because cryptocurrencies are not regulated and are not recognized by regulatory authorities, their use is currently restricted.⁴⁵ Because cryptocurrency and other related technologies are new, it is worthwhile to consider the potential benefits to the economy and the general public. But it's also important discussing the "dark" sides of using cryptocurrencies, as well as the risks/obstacles that authorities may face. This section seeks to provide an outline of later research themes.

2.4.1 Benefits

The first benefit of cryptocurrency is cheaper transaction costs. Because bitcoin transactions bypass banks and other financial institutions, they tend to be cheaper.⁴⁶ Due to the

⁴⁴ <https://ethereum.org/en/foundation/>

⁴⁵ David W.Perkins “*Cryptocurrency : The Economics of Monet and Selected Policy Issues*” p. 10 (Congressional Research Service; 2020) accessed April 1, 2022. Available on <https://sgp.fas.org/crs/misc/R45427.pdf>

⁴⁶ European Banking Authority (EBA) “*Opinion on “virtual currencies”*”, p.16 , (July 4, 2014), Accessed April 01 , 2022, Available on <https://www.eba.europa.eu/sites/default/documents/files/documents/10180/657547/81409b94-4222-45d7-ba3b-7deb5863ab57/EBA-Op-2014-08%20Opinion%20on%20Virtual%20Currencies.pdf?retry=1>

large quantity of technology and computer networks needed to process transactions, financial institutions charge a range of fees to cover costs and make profit. As a result, cryptocurrencies seem profitable in this case. It's also worth mentioning that cryptocurrencies could be even more profitable in international transfers, as such transfers typically include more bank activity, such as currency exchanges and transfers to other banks in distant states. Cryptocurrency transactions circumvent intermediaries and proceed directly through the global network, avoiding these charges.⁴⁷ Although cryptocurrency transactions will almost definitely include a charge, it tends to be modest. The average charge for a Bitcoin cryptocurrency transaction is less than 1% of the transaction value, or 0.0005 BTC, however it should be emphasized that determining the most reliable information is difficult.⁴⁸ However, as noted previously, miners are the major producers of cryptocurrencies, and they earn from both the mining process and the transactions they conduct. As a result, if the amount of mined cryptocurrencies drops due to increased virtual currency adoption, transaction fees may rise as a result. Virtual currencies may also suffer the same fate as fiat currencies due to legislation requiring intermediaries (banks, etc.) to protect, supervise, and oversee transactions, which also rise transaction fees. Finally, technologies like SEPA should be investigated because they considerably simplify transactions within the "Euro" currency and reduce many of the above-mentioned costs, reducing the benefits of bitcoin transactions.

Second, compared to fiat currency transactions, cryptocurrency transactions tend to settle significantly faster.⁴⁹ Typically, Ethereum transaction processing takes five minutes, but it can take up to four hours in some cases.⁵⁰ Thus, compared to card payments and credit transfers, virtual currencies are preferred due to aforementioned and the fact that transactions can be processed 24/7.

⁴⁷ Ben Shiller “*The Fight for the \$400 Billion Business of Immigrants Sending Money Home*” (Fast Company, April 28, 2017). Accessed April 1 , 2022. Available on <https://www.fastcompany.com/3067778/the-blockchain-is-going-to-save-immigrants-millions-in-remittance-fees>

⁴⁸ European Banking Authority (EBA) , supra note 44.

⁴⁹ Octavian Nica, Karolina Piotrowska, Klaus Reiner Schenk-Hoppe “*Cryptocurrencies: Economical benefits and risks*” p.8 , (University of Manchester, 2017) , Accessed April 1, 2022.

⁵⁰ Coinlist.co. “How long do ether transactions take ?” , Available on <https://coinlist.co/help/how-long-do-ether-transactions-take>

Considering the aforementioned, such advantages could assist both large and small business units. Because cryptocurrencies have no intermediaries, they are more efficient and faster, making business activities simpler. Moreover, the lack of rules and lower transaction costs make corporate activity cheaper.⁵¹ The current legislative uncertainties (discussed further) is also a severe hurdle for investors, as well as increased use as a regular currency. Moreover, the introduction of cryptocurrencies results in inherent economic growth due to the emergence of new industries like mining. Mining also drives the development of related technologies, such as new mining equipment and new mining technologies, as well as the development of connected services. The desire to trade virtual currencies for fiat currency or other cryptocurrencies opens up new trading platforms and exchanges. The impact of cryptocurrencies on the financial system, especially the banking sector, is clear. Finally, the public's trust in this currency's security is worth mentioning. No personal or sensitive user data, passwords, or other forms of identification are required for cryptocurrency transactions. This reduces the risk of identity theft by removing a potential source.

2.4.2 Risks

Like the previously stated benefits, using cryptocurrencies has a number of possible drawbacks, both technical and legal, that should be thoroughly examined. Of course, the legal complexities and potential difficulties connected with cryptocurrencies are of greater importance within the scope of the research, However, the author believes it is vital to briefly discuss the other most relevant aspects associated to cryptocurrencies. The legal hazards of utilizing cryptocurrencies and how to deal with them will be covered in greater detail in the coming chapters of this study, but for now, an overview of the material will be provided that should only provide a basic grasp of the subject.

⁵¹ Octavian Nica, Karolina Piotrowska, Klaus Reiner Schenk-Hoppe , supra note 47 .

The first point to make is that cryptocurrency can be used to launder money. Similar to cash transactions, decentralization and anonymity of cryptocurrency transactions allow criminals to avoid developing relationships with financial institutions as intermediaries, preventing any information about such transactions from being recorded.⁵² In most cases, this risk arises because virtual currency transactions do not require any identification and do not require a name to be linked to the wallet. The ability to use cryptocurrency transactions quickly and without binding to any jurisdiction, as well as the ability to work only with Internet access and scattered infrastructure around the world, allows to use this system for money laundering and terrorist financing. For example, considering bitcoin, in accordance with Department of Justice U.S. Attorney's Office of Southern District of New York the cryptocurrency has been used 100 000 times by users in period since 2011 till 2013 to buy and sell drugs and illegal goods and services⁵³.

This leads to the second issue: avoiding taxation by concealing income from the state. Problem is that cryptocurrencies are a new technology that isn't adequately regulated legally, thus it's unclear why or what tax should be paid. Because there is no consensus on what income cryptocurrencies should be compared to, users may undervalue their profits, whether deliberately or unconsciously. In the *United States v. Coinbase Inc.* case, the IRS claimed that just 1000 people electronically submitted cryptocurrency gains, meaning that cryptocurrency revenues are underreported.⁵⁴ A money laundering scheme consists of three steps: bringing in illicit funds in small or large amounts, laundering, distributing and reintegrating them into legal circulation.⁵⁵ In practice, cryptocurrencies are ideal for such activities because they can be used in any or all of the stages.

⁵² European Banking Authority (EBA), supra note 46 , p.32

⁵³ Department of Justice U.S. Attorney's Office of Southern District of New York , "*Ross Ulbricht , The Creator and Owner of the "Silk Road" Website, Found Guilty In Manhattan Federal Court On All Counts*" (The United States Attorney's Office, 2015) , Accessed April 2, 2022, Available on <https://www.justice.gov/usao-sdny/pr/ross-ulbricht-creator-and-owner-silk-road-website-found-guilty-manhattan-federal-court>

⁵⁴ Case No. 17-CV-01431-JSC , *United States v. Coinbase, Inc.* (2017) , Available on <https://static.reuters.com/resources/media/editorial/20210405/United%20States%20v%20Coinbase%20Inc.pdf>

⁵⁵ Sabrina Adamoli , "*money laundering*" (Britannica, 2022) , Available on <https://www.britannica.com/topic/money-laundering>

Finally, cryptocurrencies have technological and economic issues. Cryptocurrencies using the PoW technique are dependent on miners who in turn are dependent on rewards and the value of the virtual currency itself, thus if values decline, the interest of miners declines as well, putting the security of cryptocurrencies in jeopardy. Because as power diminishes, transaction time lowers, allowing the miner to attack the blockchain, leading to a further decline of miners.⁵⁶ However, the cryptocurrency's extraordinary volatility motivates miners to store up more money in crypto-assets (especially in the case of Bitcoin, because the cryptocurrency is limited to a certain number of coins, which leads to the fact that the value does not decrease). That is, replacing existing money with cryptocurrency will ultimately lead to price declines, stifling economic progress. A deflationary climate, on the other hand, is hazardous to prosperity.⁵⁷ Furthermore, given present currency volatility, cryptocurrencies are a poor substitute for a unit of account, a short-term instrument for preserving value, and an exchange medium.

3. LEGAL STUDY

3.1 Cryptocurrencies market and its regulation

In accordance with information as of April 2022 the cryptocurrencies total market capacity amounts \$ 2,006,629,723,537 with nearly over 10 000 cryptocurrencies and 18 753 crypto markets in total. ⁵⁸ The 24-hour trading volume amounted \$ 89,088,222,454. The dominating cryptocurrencies are Bitcoin and Ethereum with the dominance level of 41.2 % and 19,3% respectively. The cryptocurrency market includes approx.. 500 crypto stock exchanges including the row of five largest ones – Binance, Coinbase Exchange, FTX, Kraken and KuCoin. ⁵⁹

⁵⁶ Octavian Nica, Karolina Piotrowska, Klaus Reiner Schenk-Hoppe , supra note 47, p. 15-16

⁵⁷ Beat Weber “*Bitcoin and the legitimacy crisis of money*” (Cambridge Journal of Economics, 2014) p. 17. Accessed April 2, 2022. Available on https://www.researchgate.net/publication/270889701_Bitcoin_and_the_legitimacy_crisis_of_money

⁵⁸ Coinmarketcap – All Cryptocurrencies , <https://coinmarketcap.com/all/views/all/>

⁵⁹ Coinmarketcap – Top Cryptocurrency Spot Exchanges. <https://coinmarketcap.com/rankings/exchanges/>

The estimated size of Bitcoin peer-to-peer network participants amounts of 15916 nodes as of April 7, 2022 between countries of the world, including the first 5 rows as United States (2019 nodes) , Germany (1495 nodes) , France (536 nodes) , Netherlands (347 nodes) and 8616 nodes with not identified place of possession .⁶⁰

In accordance with Ethereum statistics the size of ETH peer-to-peer network participants include 5578 nodes in total mostly divided by United States (2545 nodes) , Germany (737 nodes), Singapore (289 nodes), United Kingdom (249 nodes) and Finland (187 nodes).⁶¹

According to the information above, such a large market cannot be completely unregulated by regulatory authorities; however, because the market is still relatively new, there appear to be a lack of explicit regulations addressing the use of cryptocurrencies and encompassing all possible specters of such currency. In the absence of clear regulations, use/implementation of it by users is inhibited,⁶² as well as the currency can be freely utilized in unlawful activity, which is detrimental for both cryptocurrencies and governments. Lack of a well-established legal framework for cryptocurrencies renders them more open to potential hacking and cash theft due to lack of protection offered by law and other rules. In the event of a hack or other incident, victims may struggle to get regulatory support.

Thus, the purpose of this Chapter is to analyze the legal position of cryptocurrencies based on official government statements and laws, as well as bank and scholarly perspectives.

3.1.1 Regulation of Cryptocurrency's market

⁶⁰ Bitnodes – REACHABLE BITCOIN NODES, Available on <https://bitnodes.io/>

⁶¹ Ethernodes.org – Ethereum Mainnet Statistics . Available on <https://ethernodes.org/countries>

⁶² Octavian Nica, Karolina Piotrowska, Klaus Reiner Schenk-Hoppe , supra note 54 , p.33

Because cryptocurrencies are essentially an anonymous network for performing global transactions, regulatory bodies around the world are concerned about their regulation and supervision. In practice, the world is still divided on this topic. As a result, legislators are divided into two groups: those who oppose its usage owing to lack of control, and those who try to regulate it and limit illicit acts produced by it.

In accordance with Library of Congress research⁶³ as of November 2021 it could be said that mostly most of the world already has a certain layer of regulations on cryptocurrencies whether as simple regulations on its control or Anti-Money Laundering and Anti-terrorism financing law (AML/CFT). According to Figure 3.1. “Regulatory Framework for Cryptocurrencies” it could be

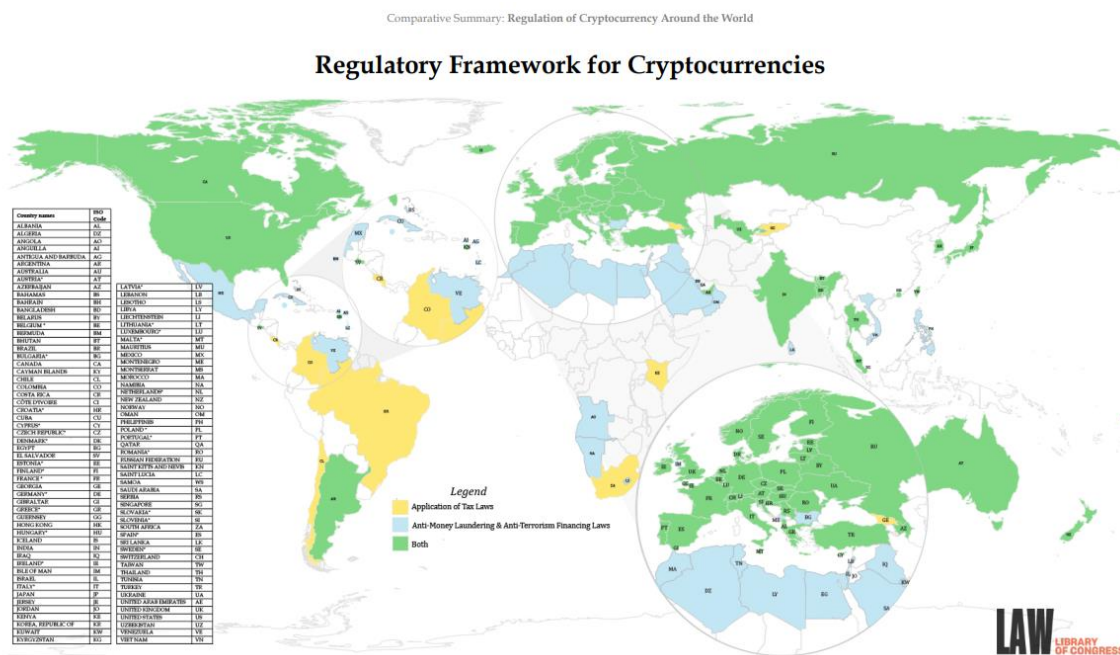


Figure 3.1. Regulatory Framework for Cryptocurrencies. Library of Congress “Regulation of Cryptocurrency Around the World : November 2021 update” (Global Legal Research Directorate, 2021) p.67

seen that most part of the world has both regulations on tax law and AML/CFT, including such States as USA, Canada, Russia, and whole EU states. However, there are also some exclusions as Brazil, Mexico, or Bulgaria where the Cryptocurrencies are regulated only in terms of tax law

⁶³ Library of Congress “Regulation of Cryptocurrency Around the World : November 2021 Update” (Global Legal Research Directorate, 2021) Accessed April 8, 2022. Available on <https://tile.loc.gov/storage-services/service/l1/l1glrd/2021687419/2021687419.pdf>

(Brazil), or in terms of AML/CFT. But, in the light of Figure 3.2. “Legal Status of Cryptocurrencies” it could be seen that there are also some countries that have banned the cryptocurrencies in absolute or implicitly. Countries like China, Nepal, Egypt, Tunisia, Morocco, Algeria, and others, for example, have an outright prohibition on cryptocurrencies, meaning that any travelling or holding of cryptocurrency is forbidden and might be considered a criminal conduct. Other nations, like as Saudi Arabia, Georgia, Kuwait, the Central African Republic, and Bahrain, have implicit bans on cryptocurrencies, which means that banks and other financial institutions are barred from dealing with or supplying cryptocurrency-related services.

Comparative Summary: Regulation of Cryptocurrency Around the World

Legal Status of Cryptocurrencies

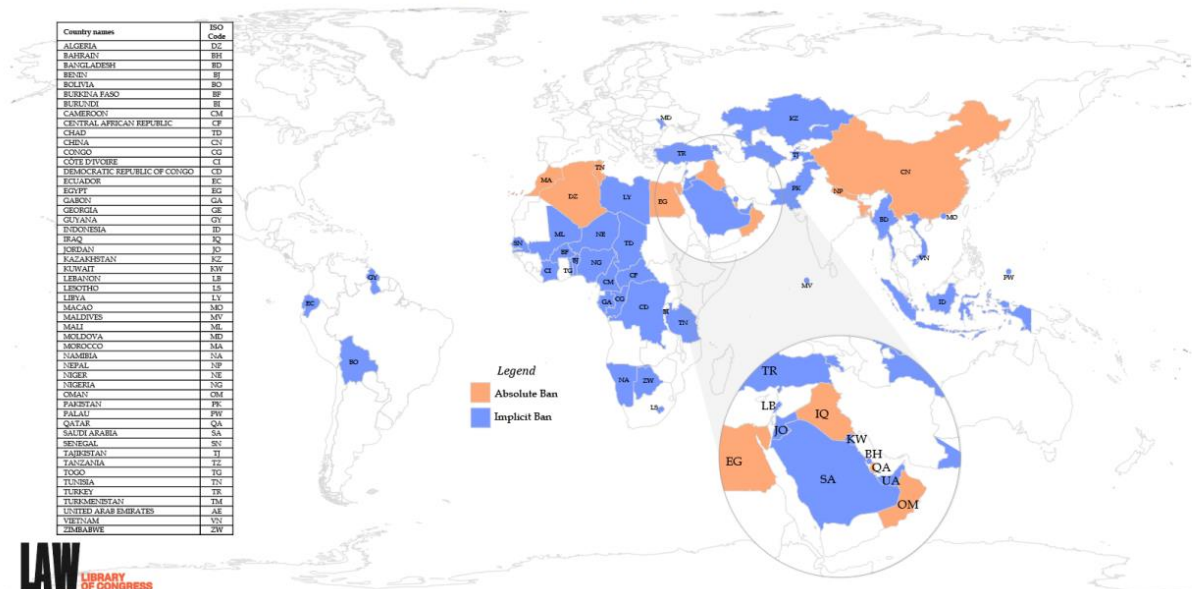


Figure 3.2. Legal Status of Cryptocurrencies. Library of Congress “*Regulation of Cryptocurrency Around the World : November 2021 update*” (Global Legal Research Directorate, 2021) p.67

However, it also shall be noted there are different various methods of regulation of Cryptocurrencies. For example, in South Korea, a rule was enacted to protect the stock market and reserve money requirements, such as currency exchange. The South Korean financial services commission enacted legislation requiring bitcoin transactions to be made solely from legitimate

bank accounts.⁶⁴ In addition, there are also methods aimed to regulate amount of debt, number of users, number of daily transactions, i.e., system risk management, and as was previously mentioned, tax laws. It's also worth noting that, at the present, research on cryptocurrency regulation is ongoing and relevant. To protect financial institutions, customers, and other persons who are users of cryptocurrencies in the usual sense, i.e., involved in the buying/selling or holding of cryptocurrencies, European financial institutions, namely the European Banking Authority, suggested in his report that national regulators only encourage financial services with cryptocurrencies regulated by regulation authorities. A suggestion was made to build a response mechanism between financial institutions and the stock market as a remedy.⁶⁵

In addition, states are increasingly accepting cryptocurrencies as legal tender. Two countries in the process of reaching such a decision are El Salvador and, more recently, the United Kingdom. For example, in June 2021, El Salvador became the first country to accept Bitcoin as a means of payment, in addition to the official currency of El Salvador, the US dollar.⁶⁶ A legislative vote adopted a “Bitcoin law” in June 2021. The law requires the Central Bank of El Salvador and the Financial System Authority of El Salvador to adopt rules and regulations to facilitate bitcoin usage and a bitcoin-to-US dollar conversion rate. The legislation also suggests that tax deductions can be paid in bitcoins, and that nation prices can be stated in bitcoins.⁶⁷ The law was approved by 62 votes. Of course, this strategy will not totally replace the usage of fiat currencies in El Salvador, but it is a brave move toward cryptocurrencies' acknowledgment, considering that this is the first and so far only precedent set. The law, according to the country's president, intends to create new jobs through infrastructure development, enhance financial services availability, and legitimize

⁶⁴ Ahmet Burçin YERELİ, Işıl Fulya ORKUNOĞLU-ŞAHİN , “*Cryptocurrencies and Taxation*” (5th International Annual Meeting of Sosyoekonomi Society, 2020) p.5. Accessed April 10, 2022. Available on https://www.researchgate.net/publication/340210271_Cryptocurrencies_and_Taxation

⁶⁵ European Banking Authority, supra note 50, p 44.

⁶⁶ International Trade Administration , “ *El Salvador Adopts Bitcoin as Legal Tender*” (Official Website of the International Trade Administration, June 16, 2021) Accessed April 10, 2022. Available on <https://www.trade.gov/market-intelligence/el-salvador-adopts-bitcoin-legal-tender>

⁶⁷ Legislative Assembly of El Salvador, “*El Salvador, the first country in the world to recognize Bitcoin as legal tender*” (official website of Legislative Assembly of El Salvador , 2021). Accessed April 10, 2022. Available on <https://www.asamblea.gob.sv/node/11282>

cryptocurrency use in places where a substantial population is not part of the formal economy. The economic issues surrounding bitcoin volatility are significant, even if the exact economic repercussions are unknown. Section 3.1.2.3 will elaborate on this situation.

Also, the UK Treasury Department has stated that it will regulate various cryptocurrencies as part of a bigger objective to make the UK a digital payment hub.⁶⁸ The Ministry of Finance says this only affects "stablecoins," although it could suggest progress in the acceptance of other cryptocurrencies like Bitcoin or Ether in the future. According to the statement, the Ministry of Finance wants to consider additional cryptocurrencies. To reassure consumers, the Ministry of Finance said that cryptocurrencies (so far just stablecoins) will be accepted as payment. Quoting Chancellor Rishi Sunak, the Chancellor elaborated :

*“-It’s my ambition to make the UK a global hub for cryptoasset technology, and the measures we’ve outlined today will help to ensure firms can invest, innovate and scale up in this country; -We want to see the businesses of tomorrow – and the jobs they create - here in the UK, and by regulating effectively we can give them the confidence they need to think and invest long-term; -This is part of our plan to ensure the UK financial services industry is always at the forefront of technology and innovation.”*⁶⁹

On the regulatory front, the government intends to adopt legislation to create a financial market infrastructure sandbox that will allow enterprises to experiment and develop more in the provision of infrastructure services. Exploring ways to make the UK tax system more competitive to boost the UK crypto asset market is also on the ministry's agenda.

3.1.2 Existing taxation of Cryptocurrency in selected Countries

⁶⁸ Michael Race , Daniel Thomas “*Cryptocurrency : UK Treasury to regulate some stablecoins*” (BBC News, 2022) Accessed April 10, 2022. Available on <https://www.bbc.com/news/business-60983561>

⁶⁹ HM Treasury “*Government sets out plan to make UK a global cryptoasset technology hub*” (2022) , Available on <https://www.gov.uk/government/news/government-sets-out-plan-to-make-uk-a-global-cryptoasset-technology-hub>

In general, according to *PwC Annual Global Crypto Tax Report 2020*⁷⁰, comparing different jurisdictions in the world, measuring twenty different areas of crypto assets taxation (however also taking into account that not all twenty areas are relevant to some jurisdictions therefore in such cases calculating the average of relevant questions), the most adapted jurisdiction to crypto assets is Liechtenstein, Malta, Australia, Switzerland and Singapore. Generally, countries give instructions for calculating capital gains on the purchase/sale of crypto-assets for individuals or corporations, as well as direct taxation of mining income and VAT/GST/Sales tax on trading payments tokens. Much of the current advice is many years behind the market, concentrating primarily on payment tokens like as Ether or Bitcoin.⁷¹ However, as the study points out, such areas of taxation as: - taxation of PoS mining and transaction validation income; - VAT implications of various utility tokens; - taxation of DeFi; – and tax reporting obligations and responsibilities of digital asset exchanges, among others, are frequently ignored and unguided. For tax purposes, cryptocurrencies are usually defined as "property", rather than "money" or "currency."

In this chapter, the report delves deeper into the issue with existing cryptocurrency taxes in a number of nations, including the European Union, the United States, and El Salvador. It will be considered as a general state of things with taxes at the regulatory level in the European Union, and the situation in specific EU member states will be investigated in greater depth.

⁷⁰ Peter Brewin, Mazhar Wani, Henri Arslanian, Nadia Fediaeva “*PwC Annual Global Crypto Tax Report 2020*” (PwC, 2020) Accessed April 10, 2022. Available on <https://www.pwc.ch/en/publications/2021/pwc-annual-global-crypto-tax-report-2020.pdf>

⁷¹ Ibid, p.7

3.1.2.1 EU

Although cryptocurrency is legal throughout the European Union, no formal law regarding the status of cryptocurrencies such as Bitcoin or Ethereum as currency has been passed.⁷² Mostly the governance of cryptocurrencies depends on regulations within the individual European Union Member States. However, the European Union has stated that the conversion between traditional fiat currency to cryptocurrency and vice versa shall be exempted from VAT. According to European Union Council Directive 2006/112/EC (VAT Directive) of November 28, 2006 on the common system of value added tax, the transactions shall be subjected to VAT in such circumstances, if the transactions are made as:

“[...] (c) ***the supply of services for consideration*** within the territory of a Member State by a taxable person acting as such; [...]”⁷³

According to the same Directive Article 135, certain transactions are exempt from prescribed the Directive, depending on the type of transaction, such as - insurance and reinsurance transactions, transactions of granting/approval or management of a loan by a person providing it, -operations with credit guarantees or any other form of money security, etc. - transactions with shares, company shares, debentures, and other securities (excluding management or custody), - foreign exchange operations, including operations of banknotes and coins used as legal tender, - and transactions (excluding management or custody) with shares, company shares, debentures, and other securities.⁷⁴ Therefore, the question arises whether the exceptions described above apply to transactions with cryptocurrencies, namely the exchange of cryptocurrencies for fiat currencies or vice versa. In accordance with Case C-264/14 *Skatteverket v David Hedqvist* The Court of

⁷² The Law of Library of Congress, “*Regulation on Bitcoin in Selected Jurisdiction*” (Global Legal Research Directorate, 2014) p 8. Accessed April 13, 2022. Available on <https://tile.loc.gov/storage-services/service/l1/lglrd/2014427360/2014427360.pdf>; Also see supra note 61. p.20.

⁷³ Article 2 (1)(c), of Council Directive 2006/112/EC of 28 November 2006 on the common system of value added tax. Available on <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32006L0112&from=EN>.

⁷⁴ Ibid, Article 135

Justice of the European Union was asked whether the Directive's exclusion applies to cryptocurrency exchange transactions, and whether this means that such transactions are not subject to VAT, or whether such transactions are subject to VAT in accordance with Article 2 (c), as transactions of provision of services for a fee.⁷⁵ In its decision, the European Court of Justice ruled that transactions involving the exchange of fiat currencies for cryptocurrencies and vice versa are covered by Article 2 (c) of the aforementioned Directive, referring to the fact that there is a reward/consideration in the transaction - a margin derived from the difference in the prices of these types of currencies at the time of purchase and sale. Despite this, the court determined that such transactions are free from VAT since they are essentially transactions involving the use of currency or coins as legal tender, and so come within Article 135 of the Directive, and hence constitute an exemption.⁷⁶ As a result, the court acknowledges that cryptocurrency is a currency, not a property. But it also shall be taken into account that such operations as buy of any of goods and services using cryptocurrencies differs from transactions aforementioned in the light of that such transactions are not a conversion of funds to other type of currency thus such operations do not fall under the exclusions mentioned in VAT Directive and therefore VAT shall be applied in this case, as well as other taxes, e.g. income tax.

However, it also could be noted that Crypto-assets cannot be interpreted as fiat money, deposits or any other repayable funds in regard that it does not fall under its definition according to Article 4(1) of Capital Requirement Regulation (CRR)⁷⁷ of the European Parliament and of the Council.⁷⁸ There is also in question whether the cryptocurrencies could be interpreted as “electronic

⁷⁵ Case C-264/14 Skatteverket v David Hedqvist , Judgment of Court of the European Union of 22 October 2015. Available on <https://curia.europa.eu/juris/document/document.jsf?text=&docid=170305&pageIndex=0&doclang=en&mode=req&dir=&occ=first&part=1&cid=604646>

⁷⁶ Court of Justice of the European Union , PRESS RELEASE No 128/15 on Judgment in Case C-264/14 Skatteverket v David Hedqvist , 22 October 2015 , Available on <https://curia.europa.eu/jcms/upload/docs/application/pdf/2015-10/cp150128en.pdf>

⁷⁷ Also known as Regulation (EU) No 575/2013 of the European Parliament and of the Council.

⁷⁸ EBA Report “*Report with advice for the European Union on crypto-assets*”, (European Banking Authority, 2019) p.12. Accessed April 12, 2022. Available on <https://www.eba.europa.eu/sites/default/documents/files/documents/10180/2545547/67493daa-85a8-4429-aa91-e9a5ed880684/EBA%20Report%20on%20crypto%20assets.pdf>

money” within given meaning of EU law. In accordance with Article 2 (2) of EMD2 Directive (E-money directive) the electronic money defined as [...] *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, and which is accepted by a natural or legal person other than the electronic money issuer;* ⁷⁹ Using this definition, the crypto-asset must meet the following criteria: crypto-asset must be – electronically stored, – has monetary value, – represents a claim of the issuer, – is issued on receipt of funds, – is issued for the purpose of making payment transactions, – and is accepted by persons other than the issuer. As a result, such needs should be assessed on a case-by-case basis, given that various cryptocurrencies have distinct properties, which are generally evolving over their existence. As open blockchain systems with tokens as a means of payment in this network, Bitcoin and Ethereum (within the cryptocurrency) might, in principle, meet this criteria. Both Bitcoin and Ethereum are backed by a fiat currency exchange rate (for example, 1 Ethereum is worth \$ 2 993) and may be used at any moment.

Therefore, based on the foregoing, and referring to Article 4 (25) of the Directive (EU) 2015/2366, under which *‘funds’ means banknotes and coins, scriptural money or electronic money* ⁸⁰, only if the cryptocurrency can be interpreted as "electronic money", any activity with such cryptocurrency falls within the scope of this directive and is regulated by it, since it can be interpreted as "funds". ⁸¹

As a matter of fact, based on the foregoing, it can be argued that the above EU legislation, in its essence, does not cover the full range of cryptocurrencies, is not adaptable to a large number of situations, and does not account for the differences in the characteristics of cryptocurrencies,

⁷⁹ Article 2 (2) of Directive 2009/110/EC of the European Parliament and of the Council. Available on <https://eur-lex.europa.eu/legal-content/en/ALL/?uri=CELEX%3A32009L0110>

⁸⁰ Article 4 (25) of Directive (EU) 2015/2366 of the European Parliament and of the Council of 25 November 2015 on payment services in the internal market, amending Directives 2002/65/EC, 2009/110/EC and 2013/36/EU and Regulation (EU) No 1093/2010, and repealing Directive 2007/64/EC

⁸¹ EBA Report , supra note 76, p. 14

thereby regulating cryptocurrencies only to a limited extent and protecting consumers' rights and the risks of illegal activities associated with cryptocurrencies.⁸²

However, the situation has changed partially when 5th Anti-Money Laundering Directive (5AMLD) and 6th Anti-Money Laundering Directive (6AMLD) were adopted. Mainly such Directives deals with and improve the EU legislation on prevention of money laundering and funding of terrorist activities,⁸³ however it also tightens regulatory obligations of cryptocurrency exchanges. According to 5AMLD the definition of virtual currency is broaden by adding new definition already provided in this paper (see Chapter 2.3.1. – Definition) and makes serious legislative step in cryptocurrency regulation, introducing the measure of obligation of cryptocurrency exchanges companies to perform reporting requirements and KYC/customer due diligence requirements, as directive amends the list specified in previous 4AMLD (Directive (EU) 2015/849) of “*obliged entities*” adding “*providers engaged in exchange services between virtual currencies and fiat currencies*”⁸⁴. But the measures under mentioned before Directives were taken very differently in county-to-country basis, some of which adopted dissimilar to EU rules in national level, others have done nothing ⁸⁵, therefore the situation in legislations differs significantly in different EU member states.

Finally, in 2020 the European Commission proposed new regulation of crypto-assets called “Market in Crypto-Assets Regulation” (MiCA). As the taxonomy of crypto-assets in its basis distinguishes the crypto-assets in four different groups: - payment tokens, investment tokens and – utility tokens, and taking into account that not all that groups are covered by existing legislation,

⁸² Patrick Hansen , “*New Crypto Rules in European Union – Gateway for Mass Adoption , or Excessive Regulation ?*” (Stanford Law School , 2021) , Accessed April 12, 2022. Available on <https://law.stanford.edu/2021/01/12/new-crypto-rules-in-the-eu-gateway-for-mass-adoption-or-excessive-regulation/>

⁸³ European Commission “*Anti-Money Laundering and countering the financing of terrorism*” Accessed April 12, 2022. Available on https://ec.europa.eu/info/business-economy-euro/banking-and-finance/financial-supervision-and-risk-management/anti-money-laundering-and-countering-financing-terrorism_en

⁸⁴ Article 1 (1) (c) (g) of Directive (EU) 2018/843 of the European Parliament and of the Council. Available on <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32018L0843>

⁸⁵ Patrick Hansen, supra note 80.

making possible significant risks to units involved (e.g., customers or investors)⁸⁶. It should also be considered the previously mentioned fragmentation of regulation at the national level, which clearly complicates the actions of business units in this sector on a domestic and cross-border level. The MiCa attempts to address all of these issues by creating a completely harmonized legislative framework that will be consistent across the EU, resulting in advantageous market conditions, free of fragmentation, and with strong protection for those engaged, such as consumers.

The same could be said about mining activity of cryptocurrency. The mining of cryptocurrency, as well as mentioned before currency itself, is considered legal throughout the EU, however it is not regulated by specific regulation. Although it is worth mentioning that, as of 2021, the subject of the mining process's energy intensity and, as a result, indirect potential environmental impact has begun to be highlighted. For example, European Securities Authority Vice-Chairman Eric Theden stated that European regulators should prohibit a specific method of mining - PoW - which is currently used by Ethereum and Bitcoin cryptocurrencies, proposing that the method of work be changed to PoS to reduce excessive electricity consumption.⁸⁷ Although there is an opposite point of view on the issue of mining. According to Maria Gabriel, the current EU commissioner for the digital economy, the issue of banning crypto-mining cannot be raised because such activities are subject to standard electricity supply rules, and there are no legal grounds for a ban or any kind of restriction if the activity is carried out legally.⁸⁸

⁸⁶ Stefan Berger “*A Europe fit for the Digital Age : Proposal for a Regulation of the European Parliament and of the Council on Markets in Crypto-Assets / Before 2020-10*” (European Parliament, 2022) Accessed April 14, 2022. Available on <https://www.europarl.europa.eu/legislative-train/theme-a-europe-fit-for-the-digital-age/file-crypto-assets-1>

⁸⁷ Eva Szalay “*EU should ban energy-intensive mode of crypto mining, regulators says: Esma vice-chair criticises method of mining bitcoin that is using more renewable energy*” (Financial Times, 2022) Accessed April 14, 2022. Available on <https://www.ft.com/content/8a29b412-348d-4f73-8af4-1f38e69f28cf>

⁸⁸ Oyinloye Bosun “*Is it legal to mine cryptocurrency in Europe*” (yahoo!finance, 2021) Accessed April 14, 2022. Available on https://finance.yahoo.com/news/legal-mine-cryptocurrency-europe-114537807.html?guccounter=1&guce_referrer=aHR0cHM6Ly93d3cuZ29vZ2x1LmNvbS8&guce_referrer_sig=AQAAAGyWm97yOHO8_0diyFbDihWu-0qEqENvOeTM1dtiHQXdlz-h41wLXZr31HMeswSjrgomwoQWpEqxj-A99VtEREm6VVuCsEI6I06n55mlaj4HO42hwnVrlPcgcnYfVnZFv1g2MtBDw0p7TKh5dSY1g3FheMOkPzimL9KlqJeUudC

3.1.2.1.1 Latvia

According to the official position of the Latvian Financial and Capital Market Commission on cryptocurrency activities, cryptocurrencies and their emission or use are not controlled in any manner in Latvia. ⁸⁹As a result, cryptocurrencies cannot be recognized as an official or state currency of the Republic of Latvia. Furthermore, as previously stated, such activities are not subject to Commission regulations, more precisely, the cryptocurrency does not fall under nor to Law on Payment Services and Electronic Money of Latvia, nor to Financial Instrument Market law, and cannot be considered financial instruments, money issuance, or payment services, and any legal or natural person engaging in such activities is not licensed or registered as a financial or capital market participant. As, cryptocurrency in its essence could be interpreted as type of good or product, it could be it used as medium of exchange.

In accordance with amendments of October 26, 2017 of Article 1 (2.2) of Latvian “ Law of the Prevention of Money Laundering and Terrorism and Proliferation Financing” virtual currency was defined mirrorlike to EU AMLD definition , defined virtual currency as a transferable digital representation of value stored/traded digitally, but it is not recognized as a legal tender, banknote, coin, etc.. ⁹⁰

Also as under EU Regulation, the cryptocurrencies (buy or sell of cryptocurrencies) are exempted from VAT in accordance with Latvian Value added tax law, as well as has right to not to register the SRS VAT payers in the light of Article 55(1) of Value added tax law.

In accordance with State Revenue Service of Latvia official comments given in 2017 , the income of cryptocurrency trading was initially the subject to personal income tax rate of 23 per

⁸⁹ Eternity Law International, “*Regulation of cryptocurrencies in Latvia*”. Accessed April 15, 2022. Available on <https://www.eternitylaw.com/news/regulirovanie-kriptoalyut-v-latvii/#:~:text=Thus%2C%20in%20Latvia%20there%20is,simply%20not%20a%20financial%20instrument.>

⁹⁰ Section 1 (2.2.) of Law on the Prevention of Money Laundering and Terrorism and Proliferation Financing. Available at <https://likumi.lv/ta/en/en/id/178987>; See also definition provided in AMLD 5 , supra note 25.

cent regardless of possession time period (i.e. how long the cryptocurrency has been held) , as such income in the light of Section 8 , paragraph 3, clause 21 of Law “On Personal Income Tax” which stipulates that other income not referred to in Section 9 (cryptocurrency was not) of this Law shall be added to the income subject to personal income tax.⁹¹

But, since the amendment of 2018 of Personal Income Tax law, the taxation of cryptocurrency was changed. In accordance with Section 11, individuals' earnings from cryptocurrency transactions are a special sort of income that, under the Law on Personal Income Tax, might be equivalent to capital gains income, which is subject to a 20% personal income tax rate. Paragraph 1(1) of the Section also explains that the original purchase value of a capital asset is subtracted from the alienation price of a capital asset to compute capital gains from virtual currency. If the capital asset's initial acquisition value cannot be established, the acquisition value is set to zero.⁹²

For mining purposes by natural person, i.e. generation of virtual currency, the income of the activity is classified as income from economic activity and equates to personal income tax from such economic activity .⁹³ Law stipulates progressive personal income tax rate for income from economic activity , which generally depends on the amount of taxable income , e.g. Income up to EUR 20 004 has tax rate of 20 percent , income from EUR 20 004 up to 78 100 – 23% ,and income bigger than 78 100 – 31%.⁹⁴

The Enterprise Income Tax Law does not contain any specific regulations for taxing virtual currency used in business activity.⁹⁵ Thus, for virtual currency transactions, the general rule of law applies. In accordance with Section 4, para.4 , The taxable base for transactions under the

⁹¹ Comment of State Revenue Service “*For Cryptocurrency transactions and taxes*” (Latvijas Viestnesis, 2017) Accessed in April 14, 2022. Available in Latvian language on <https://lvportals.lv/e-konsultacijas/11918-par-darījumiem-ar-kriptovalutu-un-nodokliem-2017>

⁹² Section 11 (1.1.) of Law “On Personal Income Tax” Available on <https://likumi.lv/ta/en/en/id/56880>

⁹³ Guideline “*Application of tax and accounting regulations to transaction with virtual currency*” (State Revenue Service of Latvia, 2022) p.9 Accessed April 16, 2022. Available in Latvian on https://www.vid.gov.lv/sites/default/files/mm_2022.01.01_virtuala-valuta-vadlinijas.pdf

⁹⁴Supra note 90. Section 15 (2) (1) of Law “On Personal Income Tax”

⁹⁵ supra note 91. p. 10

enterprise income tax shall be calculated in accordance with the standards for recognizing revenue and expenditure set out in the Law on Annual Financial Statements and Consolidated Annual Financial Statements, as well as international financial reports.⁹⁶ Because a virtual currency is essentially a thing, the costs incurred by a commercial organization to acquire virtual currencies are operating expenses, which are not included in the corporate income tax base and hence are not taxable. In case of purchase/sale of virtual currency with related parties, the Section 4 (2)(2)(e) is applicable.

3.1.2.2 USA

The Internal Revenue Service (IRS) of the United States issued its initial advice in 2014. In 2014, the Internal Revenue Service issued Notice 2014-21 in the form of FAQs, which describes the taxonomic basis of virtual currencies in the United States and provides first guidance to taxpayers on the character of gain/loss etc. According to the Notice, virtual money will be considered as property, not currency, for tax purposes under present legislation, and the basic rules that apply to property transactions will apply to transactions involving virtual currency.⁹⁷ As the Internal Revenue Service treats the virtual currency as capital assets, therefore the activities of use cryptocurrencies fall under the capital gain taxes in case of profit. Thus, the capital gain taxes shall be payable in any case of “successful” sale of cryptocurrency at profit, similarly as to sale of bonds or stock etc. The same technique is used for any virtual currency payments for products or services, i.e. purchase of goods, as the purchase of goods/services is considered as sale of capital assets (virtual currency).⁹⁸ Therefore the Businesses that receive the cryptocurrencies (whether Ether , Bitcoin or others) shall be subjected to income tax for such payments.⁹⁹ Finally, because

⁹⁶ Section 4(4) of The Enterprise Income Tax Law. Available on <https://likumi.lv/ta/en/en/id/292700>

⁹⁷ Notice 2014-21 “*IRS Virtual Currency Guidance*” (Internal Revenue Service, 2014) Q 1-2. Available on https://www.irs.gov/irb/2014-16_IRB#NOT-2014-21

⁹⁸ David Rodeck, John Schmidt “*Cryptocurrency Taxes 2022: What You Need To Know*” (Forbes Advisor, 2022) Accessed April 19, 2022. Available on <https://www.forbes.com/advisor/taxes/cryptocurrency-taxes/#:~:text=If%20you%20earn%20cryptocurrency%20by,your%20regular%20income%20tax%20rate.>

⁹⁹ supra note 95.

cryptocurrencies are property transactions, payments conducted with them are subject to the IRS's governing laws in terms of information reporting obligations.

The IRS further stated that "mining" as a trade or enterprise is liable to taxes based on the fair market value of the virtual currency on the day it is received, and that such income is treated as a regular element of regular taxable income. Under IRS fair market value is determined as “ *the price at which the item would change hands between a willing buyer and a willing seller, neither being required to buy or sell and both having reasonable knowledge of the relevant facts.*”¹⁰⁰

Wages earned in virtual currencies are likewise taxable, according to the IRS, and are subject to federal income tax withholding, the Federal Insurance Contributions Act, and the Federal Tax Act tax.¹⁰¹

Lastly , the IRS also concluded that the exchanges of different types of cryptocurrencies are also taxable as could not be classified “ *as exchange of property for property of like kind*”.¹⁰² Before the Tax Cuts and Jobs Act (TCJA) ,in accordance of Section of 1031 of 26 U.S. the law provided an exceptions of property that are free from gain tax, if such property held for productive use in a trade or business or for investment is exchanged solely for like-kind property, also defining the “like-kind” as “[...] *have reference to the nature or character of the property and not to its grade or quality [...]*” and providing that “ *One kind or class of property may not, under that section, be exchanged for property of a different kind or class. [...]*”¹⁰³ The IRS concluded in a Memorandum that the bitcoin for ether / bitcoin for litecoin / ether to litcoin exchange did not qualify as a like-kind exchange under Section 1031, comparing the cryptocurrencies and stating that bitcoin and ether play very different roles from other cryptocurrencies, as well as having

¹⁰⁰ Publication 525 , “*Taxable and Nontaxable Income*” (Internal Revenue Service, 2021). Available on https://www.irs.gov/publications/p525#en_US_2021_publink100025163

¹⁰¹ supra note 97. ; See also Scott.D. Hughes “*Cryptocurrency Regulations and Enforcement in the U.S.*” (The Werstern State University Law Review Association, Inc., 2017) p.12

¹⁰² Ronald J.Goldstein , Memorandum No. 202124008 (Office of Chief Counsel of Internal Revenue Service ,2021). Available <https://www.irs.gov/pub/irs-wd/202124008.pdf>

¹⁰³ CFR §1.1031(a)-1 - Property held for productive use in trade or business or for investment.

differences in design, use, and functionality (both intended or actual).¹⁰⁴ Nevertheless, since 2018, when TCJA came into force, tangible property exchange gain or losses was excluded from mean of Section 1031, which now is applicable only in real property exchange gains and losses.

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3.1.2.3 El Salvador

As it was stated before, El Salvador by introducing the “Bitcoin Law “ has adopted the Bitcoin as legal tender , alongside the its national currency – US Dollar. Such an action is an innovative decision, which is still unprecedented in the rest of the world, and therefore it is not entirely clear how it will/could be regulated.

According to the Bitcoin law¹⁰⁶, the law intends as its goal the regulation of bitcoin on an equal footing with any other legal tender in the country, without any restrictions on its use, whether it be any transaction or any title for any private person (natural or legal) and government agency.

The law implies that any person can freely exchange legal tender fiat currency for bitcoins and vice versa at the exchange rate between them, which is freely set by the market. Also, Article 3 of this law allows you to freely express prices in bitcoins, and, in accordance with article 4, pay tax deductions in bitcoins. When considering the taxation of cryptocurrencies, the law implies that *"bitcoin exchanges will not be subject to capital gains tax, like any legal tender."*¹⁰⁷ Because Bitcoin is a legal tender, its exchange does not trigger and produce income tax, as, in accordance with mentioned before, bitcoin exchanges will not be subject to capital gain tax. Nevertheless, various transactions based on cryptocurrency appear from such law are not exempted form obvious law regulations as any legal tender, including taxes and its accounting. Although there are not any

¹⁰⁴ Denise Reyes “*Recent IRS guidance on cryptoassets*” (The Tax Adviser, 2022). Accessed April 20,2022. Available on <https://www.thetaxadviser.com/issues/2022/feb/recent-irs-guidance-cryptoassets.html>

¹⁰⁵ Suzanne Forbes “*Like-Kind Exchanges Under the Tax Cuts and Jobs Act of 2018*” Available on <https://www.jmco.com/like-kind-exchanges-under-tcja-2018/>

¹⁰⁶ Avik Roy “*El Salvador’s Bitcoin law: Full English Text*” (FREOPP, 2021) Accessed April 20,2022. Available on <https://freopp.org/el-salvadors-bitcoin-law-full-proposed-english-text-9a2153ad1d19>; Also can see the original text of Bitcoin law in Spanish , available in <https://perma.cc/X5RJ-XKE7>.

¹⁰⁷ Ibid , Article 5 of Bitcoin law.

exact tax regulations concerning Bitcoin, it could be supposed that tax rules related to everyday life apply to activities using bitcoin, as it would apply for activities with US dollars. For example, the mining activities may fall under the personal income tax law, as such activity may be interpreted as entrepreneurial activity, as similar activities that bring profit, and implies the systematic engagement of such activities within the meaning of Article 9 Income tax law although it is not directly mentioned in this law. Also, the status of legal tender means that salaries can be paid legally with bitcoin, therefore they are also subject to income tax.

Furthermore, the President of El Salvador's legal counsel has declared that foreign investors will be exempt from capital gains and income taxes of bitcoin price positive changes.¹⁰⁸ Finally, in 2021 announced plans to build tax free city based on mining of Bitcoin, which would be exempted of any taxes excepting Value-added tax of 13% of which 6,5% will be managed by the municipality for public services and other urban needs.¹⁰⁹ Although the actuality of this project, as well as the potential of efficient regulation, as well as the very topic of money laundering, both considering the notion of creating a city, as well as decreasing taxes and recognizing it as legal cash, is quite a huge question in practice.

3.2 Cryptocurrencies-tax optimization

Given the properties of cryptocurrencies discussed previously, namely their decentralized structure and operation without a central intermediary (for example, in the face of a bank), it can be argued that cryptocurrency regulation in terms of tax evasion is insufficient, but rather essential for cryptocurrencies. Given that cryptocurrencies operate in a worldwide network - cyberspace - with no territorial limitations, it might be claimed that they have the possibility to incorporate more

¹⁰⁸ Alex McShane “*El Salvador to Exempt Foreigner Investors from Tax on Bitcoin price Gains*” (Nasdaq, 2021) Accessed April 20 , 2022. Available on <https://www.nasdaq.com/articles/el-salvador-to-exempt-foreigner-investors-from-tax-on-bitcoin-price-gains-2021-09-13>

¹⁰⁹ Albinson Linares, Noticias Telemundo “*A ‘Bitcoin City’ in El Salvador inspired by ancient Greeks? Here’s a reality check*” (NBC, 2021) Accessed April 24, 2022. Available on <https://www.nbcnews.com/news/latino/bitcoin-city-el-salvador-inspired-ancient-greeks-s-reality-check-rcna6944>

favorable jurisdictions with "lower" taxes regulations (e.g., El Salvador cryptocurrency tax policy), thereby making tax evasion lawful.¹¹⁰ Because of the conditional independence of taxes from country to country, there are contradictions between national regulation of cryptocurrency and international legislation, which includes issues with tax evasion regulation.

The previously established US taxation system appears to be more successful in achieving any outcomes because it is regulated by one regulatory body, the US Internal Revenue Service. Inconsistencies in national tax legislation may make tax evasion totally legal.¹¹¹ It's also worth noting that Cryptocurrency's features contain ambiguous attributes, i.e., they may be classed under numerous titles under current regulation, producing considerable confusion regarding categorization. As indicated in the previous chapter of the study report, various laws attribute cryptocurrencies to various terms. Some EU countries, like Latvia, and some non-EU countries, including the US, categorize cryptocurrencies as commodities, despite EU legislation designating them as currency. Commodities are interchangeable products, according to EU laws (including such goods as metals, ores, etc.).¹¹² In other words, cryptocurrencies cannot be included in such a definition because, in the eyes of the directive, they are not interchangeable because they have different characteristics, and thus cryptocurrency is defined as a "digital representation of value" with no intrinsic value in both the AMLD and domestic Latvian legislation. Some may argue that in the short term, this approach is permitted because the technology is new and unregulated, making it significantly less expensive to define it under existing laws than creating new legislation. However, this leads to the previously noted difficulties.

¹¹⁰ European Parliament, Directorate-General for Internal Policies of the Union, A. Snyers, R. Houben , supra note 2 , p. 54

¹¹¹ Piergiorgio Valente “*Taxless Corporate Income: Balance against White Income, Grey Rules and Black Holes*” Volume 57. No.7 (European Taxation , 2017) p. 275.

¹¹² Article 2 (6) of Commission Delegated Regulation (EU) 2017/565 of 25 April 2016 supplementing Directive 2014/65/EU of the European Parliament and of the Council as regards organisational requirements and operating conditions for investment firms and defined terms for the purposes of that Directive (Text with EEA relevance.). Available on <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32017R0565#d1e1089-1-1>

Given the above, and the fact that tax evasion is not necessarily unlawful (it is often completely legal activities), it can be claimed that authorities can detect such transactions by acquiring a complete list of transactions undertaken, in order to find any non-payment or evasion.¹¹³ It's also worth contemplating the globalization of economic activity and the various company models that have emerged in recent years. As a result, increasing international cooperation in the fight against tax evasion is critical to collecting more data and fighting fraud more effectively.¹¹⁴ Due to Ethereum and Bitcoin's decentralized nature, existing regulatory frameworks like the CRS usually require financial companies to report vital information like account balances, etc.¹¹⁵

3.2.1 Cryptocurrencies and tax evasion

In general, the term "tax evasion" refers to any illegal activity by persons including the omission, concealment, or misrepresentation of facts in order to reduce their tax payments.¹¹⁶ As previously noted, tax evasion is a major issue for all states and unions since it reduces national income, putting public infrastructure and services at risk. As a result, it is reasonable to suppose that such a situation is addressed by particular legislation at both the national and international levels. As a result, it's critical to go over/list the existing rules and regulations that apply to this type of activity.

3.2.1.1 EU

¹¹³ Anna Vaivade , Supra note 30 , p 32.

¹¹⁴ Alfredo Collosa, "*Importance of International Cooperation between Tax Administrations*" (CIAT, 2019) Accessed April 30, 2022. Available on <https://www.ciat.org/importance-of-international-cooperation-between-tax-administrations/?lang=en>

¹¹⁵ OECD "*Standard for Automatic Exchange of Financial Accounts Information in Tax Matters*" (OECD Publishing , 2014) p. 31 Available on <https://doi.org/10.1787/9789264216525-en>.

¹¹⁶ Katie Benson "*Assets, Crimes and the State : Innovation in 21st Century Legal Responses*" (Taylor & Fancis Group, 2020) p.23. Available on ProQuest Ebook Central, <https://ebookcentral.proquest.com/lib/lulv/detail.action?docID=6036705>.

In European Union's level there were adopted specific directive on tax evasion mainly affecting the functioning of the internal market named The Anti-Tax Avoidance Directive(ATAD)¹¹⁷ containing five legally-binding anti-abuse measures , which all EU Member States shall apply and create minimum level of protection against tax avoidance and aggressive tax planning.¹¹⁸ However there are also some important EU directives that amends and combat tax evasion and tax fraud or connected problems , such as AMLD (anti-money laundering) , DAC¹¹⁹ (administrative cooperation in terms of taxation) and Council Directive 2010/24/EU (mutual assistance of claims relating to taxes).

ATAD deals with transborder transactions of corporate taxpayers preventing the reduce of corporate companies' taxes due to difference of tax regimes of different States. ¹²⁰ The directive covers the areas of -interest deduction, -exit taxation, - general anti-abuse rule, -controlled foreign companies and – hybrid mismatches. After the amendment of directive of 2017 of Council Directive (EU) 2017/952, the ATAD also covered the third countries jurisdictions tax benefits. ¹²¹ Initially, however, tax evasion actions involving crypto assets (for example, investments in cryptocurrency in a more favorable regime) were not covered by ATAD because cryptocurrencies did not fall within the definitions provided by Directive, and thus were not matched with mismatches of financial instruments treated by Directive.¹²² Nevertheless, the European Union, in accordance with the published draft of amending Directive 2021/0434 (ATAD III), which aims to

¹¹⁷ Council Directive (EU) 2016/1164 of 12 July 2016 laying down rules against tax avoidance practices that directly affect the functioning of the internal market

¹¹⁸ European Commission “*The Anti Tax Avoidance Directive*” (official EU website) Available on https://ec.europa.eu/taxation_customs/anti-tax-avoidance-directive_en

¹¹⁹ Council Directive 2011/16/EU of 15 February 2011 on administrative cooperation in the field of taxation and repealing Directive 77/799/EEC

¹²⁰ European Commission, supra note 116.

¹²¹ Thomas van der Vliet , Suzanne Walstra “*Amendments to the Anti-Tax Avoidance Directive (ATAD)*” (GT ALERT, 2017) . Accessed April 30, 2022. Available on <https://www.gtlaw.com/en/insights/2017/4/amendments-to-the-antitax-avoidance-directive-atad>

¹²² Anna Vaivade , supra note 111, p.38

restrict the use of shell companies, has finally included cryptocurrencies in the scope of the Directive, meaning that firms holding crypto-assets would be included.¹²³

Directive 2010/24/EU is designed to deal with other, later stages of taxation, enabling for the recovery of all taxes and charges stated within the directive's scope.¹²⁴ According to Article 6 of the Directive, it is also permissible to communicate information without prior request, and it also permits authorities from one Member State to conduct inquiries and act on the territory of another Member State,¹²⁵ greatly broadening the scope of the Directive's application. Thus, it could assume that theoretically the transactions using cryptocurrency also fall under the Directive regulation, as directive is facing with the taxes which is already known to the authorities , therefore crypto-assets does not need to be regulated specifically/ differently from other transactions within the scope of Directive in regard that such transactions does not differ from any other transactions in the light of this law. However, the success of such Directive largely depends on willingness of States to cooperate.¹²⁶ In addition, it is in question whether the cryptocurrency's transactions would be in practice be known to tax authorities, as cryptocurrencies are characterized as anonymous (or pseudo-anonymous) currency. As result, the practical usage of Directive could face the problem of underreport of know results as it was described earlier.

In the light of stated above, it also important to mention the Directive 2011/16/EU, which, in general, encourage the Member States to cooperate within the EU in regard of taxation questions. In accordance with Directive, the scope is to provide rules and procedures under which the Member States shall exchange with information significant to the national administration and

¹²³ Michel Collet , “ATAD III : It is urgent to test this year the substance of holding companies in light of the shell entities directive” (CMS LAW-NOW, 2022). Accessed April 30, 2022. Available on https://www.cms-lawnow.com/ealerts/2022/03/atad-iii-it-is-urgent-to-test-this-year-the-substance-of-holding-companies-in-light?cc_lang=en

¹²⁴ Article 2 of Council Directive 2010/24/EU of 16 March 2010 concerning mutual assistance for the recovery of claims relating to taxes, duties and other measures

¹²⁵ Ibid , Article 7

¹²⁶ Ilse De Troyer “Recovery Assistance in the EU : Evaluatuion of Directive 2011/24/EU : Time for update?” Volume 23, Issue 5 (EC Tax Review, 2014) p.284.

enforcement of domestic laws.¹²⁷ In accordance with Article 8 (1) of the Directive the competent authorities within the EU shall “[...]communicate to the competent authority of any other Member State [...]”¹²⁸ providing information available about their residents about categories of income and capital listed in the paragraph. Nevertheless, the cryptocurrencies (as well as custodian wallets of crypto-assets) , in general, did not fall under the Directive initially , raising a lot of questions of its qualification and difficulties of application of Directive ,in regard of different definition of crypto-assets in different States,¹²⁹ the situation might alter as a result of the DAC 8 proposal, given that the purpose of the effort is to revise the Directive in order to ensure that EU legislation keep pace with the growing economy, which includes crypto-assets and e-money.¹³⁰ Therefore, it is planned to define the crypto-assets in terms of that in would fall under the scope of DAC and its amendments (e.g. DAC2), also taking into account the specific characteristics of cryptocurrencies. In addition, the in DAC8 is planned to define crypto-assets intermediaries to be in scope of Directive establishing the reporting requirements, as Directive at the moment does not include an obligation to report crypto-assets or the relevant intermediaries and have low level of tax transparency.¹³¹

3.2.1.2 Anti-money laundering Directive (AMLD)

Initially, the AMLD did not contain any explicit direct provisions that may bring cryptocurrency-related activity under the Directive's scope. According to the 4th Anti-Money Laundering Directive, the only definition that could potentially fit crypto-assets to regulation was the term "Property" provided in Directive, which has brought enough to include it within, as the

¹²⁷ Article 1 of Council Directive 2011/16/EU of 15 February 2011 on administrative cooperation in the field of taxation and repealing Directive 77/799/EEC

¹²⁸ Ibid, Article 8(1).

¹²⁹ Anna Vaivade, supra note 120 , p.41

¹³⁰ European Commission “*Tax fraud & evasion – strengthening rules on administrative cooperation and expanding the exchange of information*”. Available on https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12632-Tax-fraud-&-evasion-strengthening-rules-on-administrative-cooperation-and-expanding-the-exchange-of-information_en

¹³¹ European Commission DG Taxation and Customs Union “*Platform for tax good governance DAC8: Objectives and options for achieving them*” (European Commission, 2021) Available on https://ec.europa.eu/taxation_customs/system/files/2021-01/dac8_presentation.pdf

definition includes "assets of any kind"¹³² including intangible immovable electronic assets, making it suitable for the inclusion of cryptocurrencies. However, as 4AMLD does not include participants, crypto exchanges, cryptocurrency / custodian wallets and any other related parties within the scope of Directive of "obliged entities", the previous mentioned do not make sense in broader perspective of inclusion of crypto scheme to fall under the directive's framework.

But since 5th amendment of AMLD the Directive's scope was brought including the cryptocurrency transactions and certain parties of crypto scheme within the Directives framework. The amendment added clear definition under the scope of Directive using the term of "virtual currency", of which the cryptocurrency is a part of, and also added the crypto exchanges (only exchange from virtual currencies to fiat ones) and custodian wallets to "obliged entities" thus obliged the parties to apply customer due diligence measures¹³³ and reporting obligations¹³⁴, thus dealing with the one of the main problems of cryptocurrencies – it's anonymity.

However, it seems to be a problem that AMLD cover not the entire range of possible participants in the crypto scheme, which are currently much more that covered "crypto-fiat" exchanges and custodian wallets¹³⁵. For example, the P2P trading platforms and exchanges are not covered by the Directive, which obviously could thought to be a problem, as such platforms are popular and more or less have same characteristics as exchanges included differing only by crypto-crypto exchange despite crypto-fiat. Also, it also shall be considered that the crypto operations could include buy of products directly for crypto assets. For example, Latvian leader airline currently is accepting the Bitcoin, Ether and some other cryptocurrencies as mean of payments.¹³⁶ Therefore all these specters of users generally operate in anonymous manner and does not

¹³² Article 3 (3) of Directive (EU) 2015/849 of the European Parliament and of the Council of 20 May 2015 on the prevention of the use of the financial system for the purposes of money laundering or terrorist financing, amending Regulation (EU) No 648/2012 of the European Parliament and of the Council, and repealing Directive 2005/60/EC of the European Parliament and of the Council and Commission Directive 2006/70/EC (Text with EEA relevance)

¹³³ Ibid, Article 11

¹³⁴ Ibid, Article 33

¹³⁵ Anna Vaivade, supra note 127. p.43

¹³⁶ "AirBaltic Bitcoin payments extended by various crypto currencies" (AirBaltic.com, 2021) Accessed May 1, 2022. Available on <https://www.airbaltic.com/en/airbaltic-bitcoin-payments-extended-by-various-crypto-currencies>

regulated by any restrictions of tax evasion and money laundering. It seems that such problem would not be covered within the framework of Directive in recent years, as in accordance with 6AMLD amendments' proposal, the participants mentioned are not covered. 6AMLD is limited to imposing more onerous requirements on required companies, such as cryptocurrency exchanges and wallets, extending accountability to legal and natural people, imposing harsher fines, and harmonizing EU law by establishing new "predictable crimes."¹³⁷ Of course such developments also play crucial role of preventing tax evasion , anti-money laundering and tax fraud, however it seems to be more sufficient to previously to cover all not regulated areas before stricthen of regulation framework.

The tax evasion within the framework of AML Directive is covered by definition of “criminal activities”. Criminal activities under AMLD 4 are defined as “*any kind of criminal involvement in the commission*” including all direct or indirect taxes and other situations listed in para. (a) –(e).¹³⁸ Thus the directive is including any illegal activities of obtainance of illegal proceeds of tax crimes. Therefore the tax evasion is also included in directive framework , meaning that obliged entities is obliged to report to competitive authorities in case of entity suspects or have reasonable grounds to assume of made by tax evasion proceeds for further analysis of file in terms of suspicion of money laundering and associated with it predicate offenses.¹³⁹ According to Article 57 of the 4AMLD, in terms of cross-border files, differences between national rules and their definitions should not obstruct the capacity to communicate information or provide help.¹⁴⁰ Obtainance of such information may be useful in terms of detection of tax evasion taking into account that opening of legal entities could be registered to hidden the beneficial owners thus evading taxes. But it also shall be noted that AMLD does not provide direct meaning of suspicion

¹³⁷ “*Crypto-Assets , Wallets , Exchanges and 6AMLD*” (ComplyAdvantage, 2022) Accessed May 1, 2022. Available on <https://complyadvantage.com/insights/crypto-assets-wallets-exchanges-6amld/>

¹³⁸ Supra note 130, Article 3 (4).

¹³⁹ European Parliament, Directorate-General for Internal Policies of the Union, A. Snyers, R. Houben , supra note 2 , p. 70

¹⁴⁰ Supra note 130, Article 57.

of transaction, generally raising the question of interpretation, leaving such duty to the obliged entities.

3.2.1.3 Latvia

The tax evasion in national level in Latvia is controlled by Criminal Code and is considered as criminal nature of the offence. In accordance with Section 218 of Criminal Code of Latvia, the tax evasion is defined similarly to above mentioned definition, i.e. “*evasion of tax payments or equivalent thereto or of concealing or reducing income, profits and other items subject to tax*” from State or local authorities.¹⁴¹ As in accordance to Section 15 of Law “On Taxes and Fees” of Latvia, the taxpayer’s obligation is to report all income with conforming amount of taxes and, also because cryptocurrency transactions and mining are taxed, they fall under the purview of the Section. For those who commit tax evasion, a penalty of temporary or permanent deprivation of liberty, community service, or fine with or without additional punishment activities (e.g. confiscation of property, deprivation of right to engage in entrepreneurial activity) may be imposed. However, in regard of change of more favorable tax regime, unless the chose of different tax regime is deemed by tax authorities or the court as use to one’s own advantage of tax reduction, the tax avoidance of such activity is considered fully legal.

3.3 Discussion

3.3.1 Existing regulations challenges

Consequently, current cryptocurrency rules have a significant number of unresolved current challenges in all sectors of cryptocurrency usage. The mismatch in national definitions raises worries about legal inconsistencies, potentially allowing tax evasion, especially in the age of globalization and digitalization. Lower tax policies increase the risk of tax evasion;

¹⁴¹ Section 218 of Criminal Code of Latvia.

nevertheless, 'strict' regulation of crypto assets necessitates the employment of administrative resources to establish new law that handles all possible difficulties linked to cryptocurrencies. The current legal fragmentation causes regulatory treatment differences, which causes market players to feel uncertain. Furthermore, the lack of clear definitions and standards at both the national and international levels, as well as lack of harmonization, may lead to misinterpretation of product attributes.

Considering that in most part of jurisdiction defines the cryptocurrencies as some kind of property (e.g. Latvia , US) instead of equating crypto-assets as currency for tax purposes raising a problematic situation of triggering a tax charge every time of spending it as means of exchange in daily life, as the disposal of property in many jurisdictions can be considered akin to barter transactions and resulting gain or loss mainly subjected to tax.¹⁴² It basically implies that the customer must compute the gains/losses every time they buy something with Bitcoin or Ether, which appears insufficient in terms of the user's ability to do so. As a result, it raises the question of whether new improvements of any program for tracking crypto-assets spending and automatically computing their tax liabilities should be used.

Differentiation of capital tax regimes among states of crypto-assets has also created discrepancies, as it can be observed that most jurisdictions are fitting the regulation of cryptocurrencies into existing legislation. Distinct nations within the European Union, for example, have different capital tax systems. Although Portugal does not tax crypto-to-crypto trading or cashing out transactions¹⁴³, other countries do. Capital gains on all cryptocurrency transactions, whether crypto-to-fiat or crypto-to-crypto, are taxed. There is a lack of guidelines on how to classify the income from crypto-assets, but more clarity in this area is necessary for proper tax legislation.

¹⁴² Peter Brewin , Mazhar Wani, Henri Arslanian , Nadia Fediaeva, supra note 68.p.13.

¹⁴³ MacKenzie Sigalos “*The ‘Bitcoin Family’ emigrates to Portugal for its 0% tax on cryptocurrencies*” (CNBC , 2022) Accessed May 4, 2022. Available on <https://www.cnbc.com/2022/02/06/bitcoin-family-moves-to-portugal-crypto-tax-haven.html>

It also complicates considering that, despite the definition of cryptocurrencies as kind of “property” in scope of direct taxation, the jurisdictions could have an opposite definition regarding indirect taxation (e.g., VAT). For example, State Revenue Service of Latvia noted that the transactions of crypto-assets Value Added tax law legislation does not explicitly provide that such transactions are exempt from VAT, thus referred to Case C-264/14 *Skatteverket v David Hedqvist*¹⁴⁴, thus referring the ruling with opposite definition of crypto-assets – “currency”, therefore exempting it from VAT. Hence it also means that there is no possibility of reclamation of input VAT.¹⁴⁵

To summarize the aforementioned, it appears that there is a critical problem of a large number of contradictions and little guidance accessible, potentially leading to the omission of existing legislation in terms of tax crimes, such as tax evasion. Similarly, it is worth noting that the legislation enacted to prevent tax evasion contains a number of flaws that worsen the situation.

The AML Directive does not have included all crucially important players of crypto-scheme as obliged entities in accordance with AMLD framework. Pursuant to 5AMLD the Directive is providing only clear definition of custodian wallets and crypto exchanges, via entity providing the safeguarding user’s cryptographic keys in regard to store, transfer and hold virtual currencies (custodian wallets definition) and providers engaged in crypto-to-fiat exchanges.¹⁴⁶ But the directive left behind such as miners, pure cryptocurrency exchanges, some types of Wallet providers and many other parties that are not considered as key important of such sense.

For example, considering miners of cryptocurrency, it shall be taken into account that such activity is useful mostly in connection with further trade (sell) of “mined” assets, therefore could be also used by criminals. Considering that cryptocurrencies as Ether are relatively simple for

¹⁴⁴ FAQ “*Legal entity activities with cryptocurrencies*” (State Revenue Service of Latvia, 2022) . Accessed May 4, 2022. Available on Latvian <https://www.vid.gov.lv/lv/juridiskas-personas-darbibas-ar-kriptovalutam>

¹⁴⁵ Peter Brewin , Mazhar Wani, Henri Arslanian , Nadia Fediaeva, supra note 68. p 15.

¹⁴⁶ Article 1 (1) and (3) of Directive (EU) 2018/843 of the European Parliament and of the Council of 30 May 2018 amending Directive (EU) 2015/849 on the prevention of the use of the financial system for the purposes of money laundering or terrorist financing, and amending Directives 2009/138/EC and 2013/36/EU (Text with EEA relevance)

“mining” activities referring that since it only needs of same equipment as in average PC, therefore activity could be done at home (although not in large quantities), and, in addition, the process is anonymous, thus mining could be used for illegitimate use.

In regard of wallet providers of cryptocurrency, the Directive does not take into account such types of providers, which does not “safeguard” keys and therefore does not fall within the directive’s scope. For example, besides the Custodian wallets, which fall within the Directive framework, it also shall be considered wallet providers that only needed hardware to crypto user for safeguarding its cryptographic keys on its own¹⁴⁷ - Hardware wallet providers. Thus, the usage of such hardware (provided that the funds will not be exchanged for fiat currencies through exchanges during this period of time) may be useful for crimes of tax evasion, money laundering as such activity does not regulate by law.

3.3.2 Possible improvements of cryptocurrency regulation / taxation

Given the foregoing, one may infer that present legislation requires specific steps and adjustments in order to better effectively govern cryptocurrencies and associated transactions, as well as keep up with evolving technology. As a result, this chapter will offer some suggestions/recommendations for possible solutions to the issues surrounding cryptocurrency regulation and taxes.

Expansion of legal framework to include missing parties within its scope.

Given the evolution of the cryptocurrency market, as well as the participants and technology that accompany it, it is evident that present regulation should reflect this evolution, removing the "blind spots" that have previously been highlighted. Given that the AMLD and DAC regulations are not clearly defined, and thus do not include a large number of service providers and key participants in the crypto scheme, it is necessary to include all missing persons in the

¹⁴⁷ Rakesh Sharma “*Ledger Wallet*” (Investopedia, 2021) Accessed May 4, 2022. Available on <https://www.investopedia.com/terms/l/ledger-wallet.asp>

scope of these directives, which is a necessity given the growing acceptance and use of cryptocurrencies in society.¹⁴⁸ Such list shall include parties as miners , special types of wallet providers (Hardware wallets providers , Software wallets providers) , and pure cryptocurrencies exchanges as they are also susceptible for illegitimate use of tax evasion and tax fraud. A direct explanation and a precise description of each of the aforementioned parties should be included¹⁴⁹ in such definitions to avoid misunderstanding. It's also worth considering offering extra guidance at both the layperson and state levels, so that the definition doesn't cause any discrepancies or misconceptions, and so that Member States may establish and implement/apply such laws on this topic at the national level.

Although this issue is partly dependent on criminals' real exploitation of loopholes in the law and their detrimental influence on the battle against tax fraud. According to the Robby Houben and Alexander Snyers study, it's also worth contemplating the trend of self-regulation, which is growing in popularity and making a rigid legislation approach less required.¹⁵⁰

Creation of a unified legislation.

Considering that crypto assets are frequently not subject to EU regulation due to a lack of applicable rules, as well as the fragmentation of regulation at the national level, i.e. that different Member States have different special rules for crypto assets, as well as the decentralized nature of cryptocurrencies and the frequency with which they are used across borders, it is necessary to create a single, mandatory legislation within the European Union. Such standard norms are required for healthy competition within it, as well as for the simplicity and assistance of

¹⁴⁸ Sections 266, 279 of European Parliament resolution of 26 March 2019 on financial crimes, tax evasion and tax avoidance (2018/2121(INI)). Available on https://www.europarl.europa.eu/doceo/document/TA-8-2019-0240_EN.html

¹⁴⁹ Andres Knobel “*Analysing Loopholes in the EU’s Automatic Exchange of Information and How to close them*” (Tax Justice Network, 2018) p. 18. Available on https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3320610

¹⁵⁰ European Parliament, Directorate-General for Internal Policies of the Union, A. Snyers, R. Houben , supra note 137 , p. 79.

cryptocurrency users and the preservation of the market's integrity.¹⁵¹ Also, this approach is designed to help avoid inconsistencies between different legislations, and also reduces the risk of tax attacks associated with fragmentation. Uniform rules for transparency and disclosure of information in the issuance, organization, and management of crypto-assets, measures to prevent market abuse, measures to prevent misuse for illegal purposes, and rules to protect consumer rights in crypto-asset transactions (trade, exchange) should all be included in such legislation.¹⁵² In addition, the legislation should modify present taxation regulations for crypto assets to minimize discrepancies at the national level, as well as define consistent guidelines for all crypto asset service providers (including previously stipulated ones not included in the current legislation).

Creation of an intermediary.

According to the European Banking Authority's proposal, a conditional crypto-scheme management body will be established, with the job of establishing and regulating the regulations for utilizing a specific crypto-scheme. The concept is that the body will be a non-governmental institution that will preserve the protocol's integrity, as well as the transaction register's integrity, and, as a result, will follow the law's requirements to limit the danger of it being broken. That is, any bitcoin market participant can become such a body. The EBA also states that the function can be decentralized and run through the same components of the system as the transaction ledger.¹⁵³

Although, it is worth noting that in practice, such an idea is difficult to put into practice, especially when discussing Ethereum or Bitcoin, because these cryptocurrencies are built on a permissionless blockchain (as previously stated), and thus do not imply a control lever in their scheme, because joining and participating in the network of nodes does not require the permission

¹⁵¹ European Parliament PROPOSAL FOR A REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL ON MARKETS IN CRYPTO-ASSETS / BEFORE 2020-10. Accessed May 5, 2022. Available on <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020PC0593>

¹⁵² Legislative Observatory of European Parliament “*Digital finance: Markets in crypto-assets (MiCa)*” (European Parliament, 2022). Accessed May 5, 2022. Available on <https://oeil.secure.europarl.europa.eu/oeil/popups/summary.do?id=1697291&t=d&l=en>

¹⁵³ European Banking Authority, supra note 76, p. 39-40.

/ framework of any intermediary (administrator), therefore, functionally such a body, even if it exists, is not required.¹⁵⁴

Tax initiatives

Lastly the author considers also useful to implement into current or future taxation regulations extraordinary tax incentive described by another scholar O. Marian in his research. The researcher recommended a new tax to counteract the anonymity of bitcoin, which is based mostly on taxpayers' voluntary willingness to identify themselves with the seller or middleman, disclosing their anonymity. According to the author's description, such a concept involves two alternative forms of the event, one of which will levy such a fee. The tax will work similarly to a sales tax, in that the seller will engage in a model similar to its faucet, and the fee will be necessary for each prospective cryptocurrency customer. The alternative would be for the buyer to disclose his anonymity in exchange for the deduction of this tax for that person.¹⁵⁵

In fact, such an idea looks interesting in the light of the fact that in any of the proposed options, the taxation system remains a winner, given that, in case of refusal to disclose anonymity, the tax will cover the unfulfilled tax obligations of the buyer on income, otherwise it discloses anonymity, which also can be regarded as wins, since anonymity is a key problem in cryptocurrency transactions, as mentioned more than once in this study, therefore, will reduce the risk of tax evasion in the sense of chapter 3.2. this study.

4. CONCLUSION

4.1 Summary of findings

In recall of the study's major goal was to conduct a more thorough and comprehensive investigation of the regulation of cryptocurrencies, particularly in regards to taxes and other related

¹⁵⁴ Anna Vaivade, *supra* note 133, p. 53.

¹⁵⁵ Omri Marian “*A Conceptual Framework for the Regulation of Cryptocurrencies.*” (University of Chicago Law review, 2015) p. 64-65. Available on https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2509857

issues. Various legislative acts from across the world were researched as part of the research in order to investigate different approaches to this problem and establish a theoretically conceivable way to control and tax crypto assets, as well as combat tax crimes such as tax evasion and money laundering.

In this regard, the study set itself the following questions to explore: What is the current legislation on the taxation of crypto-assets, as well as the possible path of legislation in the future.

Therefore, based on the research above, the author suggests that the dominant definition in terms of the taxation of cryptocurrencies is the type of "property", as opposed to the less popular definition of currency. Typically, national jurisdictions try to cram cryptocurrencies into existing regulations by taxing direct cryptocurrency income on capital gains. Most often in countries there are instructions for direct and indirect taxation for corporations and individuals, also including a tax on mining income (most often considering Pow blockchain systems). Within the EU, cryptocurrencies are most often exempted from VAT based on a key European Court of Justice ruling. Although it is also worth noting the high fragmentation and differences in other areas of taxation within national law, which leads to problems in light of tax avoidance, most often with international transactions. Also worth noting is the so far unprecedented case of El Salvador, which recognized cryptocurrencies (Bitcoin only) as legal tender, through the adoption of new legislation, the Bitcoin Law, which provides that the exchange of cryptocurrencies is not the purpose of capital gains taxation. Such an innovation also prompted a number of other countries to also think about accepting cryptocurrencies as an accepted means of payment, although so far it concerns only "stablecoins", which does not directly apply to this study.

In the light of tax evasion and money laundering, there are a number of mutually supportive directives in the EU that cover a wide range of these crimes, but most often do not have direct definitions of cryptocurrency in their framework, although some (ATAD III and DAC8) in the future will within the framework crypto-assets. The only EU directive in the field of tax crimes that currently includes a clear definition of cryptocurrencies is AMLD, which also includes a

partial range of participants in the crypto scheme in its framework, as "Obligated Entities". All Directives are essentially aimed at international cooperation, reporting violations between national administrations at the international level.

All of this makes regulating crypto assets within current legislation difficult. The disparity in definitions between countries raises concerns about legal oddities, perhaps allowing tax evasion. Taxation varies among countries, making it harder for consumers to use crypto assets lawfully. The existing legislation also causes issues for consumers who want to use cryptocurrencies in their daily lives. This is made worse by the lack of guidance. Finally, there are discrepancies in the definition of crypto assets in one specific legislation, and government agency directions.

Legislation designed to combat tax crimes, in the light of cryptocurrencies, also does not take into account a number of important players in the crypto scheme, which can also potentially be involved in tax evasion or laundering and is also unable to effectively combat the decentralization and anonymity of cryptocurrencies in this matter.

Therefore, referring to the foregoing, the author may infer that the hypothesis stated at the start of the study can be regarded confirmed. The current legal framework is insufficient to address all of cryptocurrency's issues and does not regulate all parts of transactions and other activities using it. The main downside of cryptocurrency transactions is their anonymity, which, according to the author, inhibits appropriate supervision, allowing shadow transactions to take place outside of the legislative framework and creating a tax evasion problem. The current regulatory structure is unable to deal with the anonymity of such transactions, resulting in their disclosure.

4.2 Overall Conclusion

The most significant area of law is taxes, because it directly impacts the state's economic stability and prohibits the use of loopholes for illegitimate purposes. This is especially true of the crypto-currency technologies incorporated in it, because it is fundamentally a new, unprecedented technology with qualities that make taxes difficult. However, the rising popularity of

cryptocurrencies as a replacement for conventional payment methods necessitates consideration in terms of legislation since contradictions with the law might have disastrous effects. Furthermore, the independence of cryptocurrencies' work from jurisdictions causes us to consider about their regulation at both the national and international levels. Things like establishing standard taxation regulations and preventing tax fraud should be prioritized. It's also worth considering the crypto scheme's apparent lack of definitions and involved parties. Finally, the creation of wholly new taxing measures to address issues with cryptocurrency anonymity and decentralization is worth noting.

Although recommendations for future legislation may only provide a partial solution to the problems caused by the properties of cryptocurrencies, they should be considered because they are the first step toward fully covering this issue in terms of effectiveness and preventing legislative loopholes that could affect other parties and spheres in the future, such as the consumer or the general market situation.

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