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COMPARATIVE ANALYSIS OF STATE REGULATIONS REGARDING CRYPTOCURRENCIES

by

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INTRODUCTION

Since 700 BCE gold coins were used as a unit of account, method of exchange and store value [1]. However, now the intrinsic value of commodity itself is not enough to qualify as money. As Peter Bernstein mentions, lots of things have a value that does not serve as money. In fact, the most effective forms of it have developed from objects that were otherwise entirely useless, such as paper and computer blips.[2]

Majority of the world uses so-called "fiat" currencies that are not valuable due to a commodity, but, instead, rely on central authority such as Bank of England. The value of such money is deriving from the trust that users place on the authority.[3] This model works fine when dealing with close transactions, such as paying your neighbor with cash to babysit. However, the process of payment becomes more costly and complicated when dealing with a developer in India, who writes a program for your business in Armenia.[4]

Due to the increase of cross-border transactions Internet commerce was introduced with respective online payment systems, such as PayPal. The operations of online payments were done through financial institutions that served as trusted third parties. The banks managing credit and debit cards had their fair share of every deal, which was estimated $48 billion a year.[5]

However, as the market grew, the need for more secure and peer-to-peer transactions increased. Thus, in 2009 blockchain technology was introduced, which lead to a creation of Bitcoin (the first successful cryptocurrency) as a unique electronic cash system that allowed online payments to be sent anonymously and directly from one person to another without relying on third parties.[6] The introduction of Bitcoin was groundbreaking because it allowed

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[1] Peter L. Bernstein, *The Power of Gold: The History of an Obsession* 24 (2004)
[2] *Ibid.*
[3] European Central Bank, *Virtual Currency Schemes* 9 (2012)
[4] Jonathan B. Turpin, *Bitcoin: The Economic Case for a Global, Virtual Currency Operating in an Unexplored Legal Framework,* 21 IJGLS 335-368 (Winter 2014)
[5] Albert A. Foer, Op-Ed., *Our $48 Billion Credit Card Bill*, N.Y. TIMES, Apr. 21, 2010, at A27, available at http://www.nytimes.com/2010/04/21/opinion/21foer.html?_r=0.
[6] Satoshi Nakamoto, *Bitcoin: A Peer-to-Peer Electronic Cash System* (2008)

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users to choose a transaction that takes place within a system that is decentralized, resilient, stable and easy to use.[7]

The existence of such powerful tool inevitably attracted the attention of States, which decided to control cryptocurrencies. Nowadays, there are many means of utilization of cryptocurrencies and other systems using cryptography or blockchain, which creates difficulties for states to organize and classify them in the legal frameworks. As the technology is new, states usually assume a hostile attitude towards the field as they look for potential risks and law infringements. One of the various ways of states exercising control is taxation. The purpose of this paper is to examine currently existing state regulations on cryptocurrency status and usage. **In particular, to what extent states should engage in extensive regulation of the field.** The first chapter of this paper will look into technical specifications of cryptocurrencies, the technology behind it and the possible use of the system in other fields. The second chapter will cover several taxation methods adopted by the states, the effectiveness and timeliness of those methods and will draw comparisons between them. The final chapter will cover recommendations for Republic of Armenia on respective policies.

[7] Joshua Baron, Angela O'Mahony, David Manheim & Cynthia DionSchwarz, *National Security Implications of Virtual Currency* Chapter 2 (2015)

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CHAPTER 1: Changing how the money works or a brief overview of cryptocurrencies

What is Cryptocurrency and Why People Invest in It

The technology behind cryptocurrencies is called blockchain. It was first introduced by unknown individual or group of people under the name Satoshi Nakamoto[8], who released a paper that described a pure peer to peer (p2p) transaction.[9] For the purposes of this part of the chapter, I am going to bring examples on first successful cryptocurrency: Bitcoin. Simply put, a Bitcoin is a chain of digital signatures that are saved in a "wallet" file. This chain contains information that includes the history of the specific Bitcoin, which allows the users to verify the legitimacy of every transaction from one user to another.[10]

The groundbreaking technology was outlined in the framework of an entirely new cryptocurrency, which combined following important elements: *ensuring pseudo-anonymity*, *independence from central authority* and *double spending attack protection*.

Firstly, it is possible to hide users identity by following specific rules, despite the fact that every transaction must be made public for verification. This can be compared to a system of stock market, where it discloses information about all trades that take place but does not identify the names, location or any other details on involved parties.[11] However, blockchain does not secure absolute anonymity for the users, because they may reveal their identity either negligently or knowingly. In particular, it is possible to trace the public keys (tools for signing the transaction) of a user and find other transactions with a similar key that will eventually lead to a person. The process of tracing is very costly and requires a lot of resources, which lowers the risks of being followed. Persons with that amount of resources will much likely make money out mining bitcoins, rather than catching people who do.[12] Parties to the transaction may choose to disclose their identity voluntarily in order to comply with state requirements. This is usually done by big companies that want to ensure their clients of genuine business activities and transparency.

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[8] Joshua Davis, The Crypto-Currency, NEW YORKER, Oct. 10, 2011, at 62, for a thorough investigation into the true identity of Satoshi Nakamoto

[9] Satoshi Nakamoto, Bitcoin: A Peer-to-Peer Electronic Cash System (2008)

[10] Gavin Andresen, Bitcoin: The World's First Person-to-Person Digital Currency, BITCOIN TRADING (June 20, 2011)

[11] Jonathan B. Turpin, *Bitcoin: The Economic Case for a Global, Virtual Currency Operating in an Unexplored Legal Framework,* 21 IJGLS 335-368 (Winter 2014)

[12] Joseph Bonneau, SoK: Research Perspectives and Challenges for Bitcoin and Cryptocurrencies

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Secondly, blockchain allows cryptocurrencies to be decentralized and independent of central authorities, which have the power of influencing the consensus rules of the cryptocurrency hub. The consensus rules are decided and supported by a scattered group of users that agree and trust in certain features of cryptocurrencies. For example, in case of Bitcoin, any change in the existing consensus can be achieved by system operators and through the actions of majority (which is usually 75-95%).[13]

The change to the consensus can be brought in two ways: soft forks and hard forks. Soft forks are features that add stricter rules. In particular, soft forks narrow down the scope of valid transactions, and as a result, the new change rejects some transactions that the old version of consensus would have accepted. On the contrary, hard forks bring up new features that were previously treated as invalid. So, the new version of consensus would recognize some previously invalid transactions as valid.[14] Due to this decentralized system, a cryptocurrency cannot be suppressed or regulated by central authorities force; a cryptocurrency can only exist by itself, and it is the users that decide whether to trust in it or no.

Thirdly, Satoshi Nakamoto created a unique double spending attack protection. In short, a cryptocurrency unit cannot be used twice to pay to two different recipients. The technology rejects the second transaction and marks it invalid if the first one already took place.[15] In order to approve or disapprove a transaction, the Bitcoin needs a network of powerful computers. Currently, at any moment, around 30,000 computers around the world are willing to verify the transaction by checking whether someone is trying to spend Bitcoin twice.[16]

Another appealing feature of using cryptocurrency is an irreversible transaction. Not only cryptocurrencies omit the long-established method of accepting payment through credit card and paying a transaction fee to banks, but they also create an irreversible transaction. With this, accepting cryptocurrency or using it as a payment eliminates the problem of "chargebacks" that is the inevitable nightmare for the businessman.

Who Uses Cryptocurrency and How They Buy It

[13] Jan Lansky, Possible State Approaches to Cryptocurrencies , University of Finance and Administration in Prague Czech Republic

[14] Arvind Narayanan, Bitcoin and Cryptocurrency Technologies: A Comprehensive Introduction, Princeton University Press (July 19, 2016)

[15] Michael J. Rosenfeld, Stanford University and Reuben J. Thomas, The City College of New York, *Searching for a Mate: The Rise of the Internet as a Social Intermediary,* American Sociological Review 77(4): 523-547, 2012

[16] Satoshi Nakamoto, Bitcoin: A Peer-to-Peer Electronic Cash System (2008)

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In order to understand State perspective on taxation matters of cryptocurrencies, we have to understand how do they make money out of cryptocurrencies.

There are three ways of obtaining cryptocurrency: (1) by "mining" them; (2) by purchasing them; or (3) by selling something and accepting payment in cryptocurrency.

As a general rule, new cryptocurrency is produced by "mining." Satoshi Nakamoto describes the process of "mining" as a complex computing process, that has to be undertaken in order to verify a transaction (for example, the sender owns the currency legitimately, and is not double-spending the coin). [17] Due to decentralized nature of most existing cryptocurrencies, those operations are carried out by a network of users[18]. The "miners" (persons who chose to run necessary software to support the user network), in case of a successful transaction, get compensation in the form of a cryptocurrency.[19] This seems like a lucrative business. However, it is believed that mining has not yet proven itself profitable.[20] The production cost is significantly higher than the amount of return in generated cryptocurrencies.[21]

The most efficient and easy way of obtaining cryptocurrency is simply buying existing ones through the exchange[22], where a user can trade a traditional currency such as dollar or euro for a cryptocurrency, at the existing exchange rate.[23] The regulation of the exchange rate is made through supply and demand ratio. After "purchasing" the cryptocurrency, it can be stored on a personal computer in a "wallet" file or alternatively on exchange servers that can be accessible from anywhere.[24]

For the purpose of comprehensive illustration of the users of the cryptocurrency, it is necessary to show relevant data gathered by European Central Bank.[25] From 2011-2018 only

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[17] Nakamoto, at 2-3.
[18] Gavin Andresen, Bitcoin: The World's First Person-to-Person Digital Currency, BITCOIN TRADING (June 20, 2011)
[19] Adrianne Jeffries, Miner Problem: Big Changes Are Coming for Bitcoin's Working Class, VERGE
[20] *Ibid.*
[21] *Id.*
[22] Bitomat, Britcoin, Intersango, ExchangeBitcoin.com, Camp BX, Bitcoin7, VirtEx, VirWox, and WM-Center
[23] Nikolei M. Kaplanov, Comment, Nerdy Money: Bitcoin, the Private Digital Currency, and the Case Against Its Regulation 5 (Temple Univ. Legal Studies Research Paper, 2012)
[24] BLOCKCHAIN, http://www.blockchain.info (last visited Aug. 6, 2013), for one example of an online-hosted wallet
[25] EUROPEAN CENT. BANK, VIRTUAL CURRENCY SCHEMES 9 (2012), available at http://www.ecb.int/pub/pdf/other/virtualcurrencyschemes201210en.pdf

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the number of users of Bitcoin went from approximately (due to anonymity it is hard to collect exact numbers) 10,000 to 13 million users.[26]

The numbers show an increase of interest among users. Some of them are attached to the idea of cryptocurrency at an emotional level when they are supporting the independent nature of cryptocurrency.[27] When looking into Bitcoin Forums, it becomes evident that users are mainly people who have disbelief in traditional and regulated central banks, and would rather work with a transparent and open-sourced currency that will secure anonymity.[28]

Another interested group consists of businessman and merchants, who highly value the irreversibility feature of cryptocurrency and 0% transaction cost. A huge amount of business carried out by these entities are in connection with virtual goods like online casinos or video games.[29] However, the tendency is shifting to real goods as well, as they are reported cases of people buying sandwiches or socks by using cryptocurrencies.[30] Moreover, a Houston defense attorney announced that he is going to accept remuneration from his clients in cryptocurrency.[31]

Types of Cryptocurrency

In order to understand and classify cryptocurrencies based of their utility it is important to understand the structural specification of existing coins. Bitcoin used the blockchain technology and was the first one to implement an open protocol system in open source code, that allowed users to view every transaction and have access to the chain. Due to this innovative method alternate cryptocurrencies, or Altcoins, quickly sprang up – mostly slightly-tweaked versions of the Bitcoin code, many generated automatically at the now-defunct service coingen.io.[32]

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26 How Many People Use Bitcoin? Updated for 2018, available at https://www.bitcoinmarketjournal.com/how-many-people-use-bitcoin/

[27] Gavin Andresen, *Bitcoin: The World's First Person-to-Person Digital Currency*, BITCOIN TRADING (June 20, 2011)
[28] *Ibid.*
[29] Joel Falconer, Bitcoin, the Peer-to-Peer Currency that Hopes to Change the World, NEXT WEB
[30] The Tuesday Podcast: Bitcoin, NPR PLANET MONEY (July 12, 2011, 6:44 PM), http://www.npr.org/blogs/money/2011/07/13/137795648/the-tuesday-podcast-bitcoin
[31] Martha Neil, My Clients Can Pay Me in Bitcoins, Criminal Defense Lawyer Says, A.B.A. J.
[32] David Gerard, *Attack of the 50 Foot Blockchain: Bitcoin, Blockchain, Ethereum and Smart Contracts,* 2017

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From technical aspect, other blockchains might have different block sizes, hashes, block times or consensus models (the method of choosing who adds the next block). Short times mean you can verify transactions faster, but too short a time means a block may not get all the way across the network before it's time for the next block – leading to "confirmed" transactions no longer being confirmed when another version of that blockchain is found that's longer.[33]

Due to this, Proof of Work system (a mining method) is no longer in need, because another consensus model was introduced: Proof of Stake, in which the next block miner is chosen at random according to how many coins they already own and not by the speed.

Usually, the creators have more of the coin than anyone else, because they are substantially pre-mining the coin before release. They launch it with questionable promises of interesting future features, then they sell their coin off (for bitcoins or other means), telling the new bagholders that they are actually early adopters. An example of this is DafuqCoin, which compromised exchanges with a rootkit because the exchanges failed to check the code before running it.[3435]

Bitcoin advocates correctly consider most altcoins a scam and can effortlessly list all the problems with them – while failing to note that most of these are also problems with the substantially early-adopter-owned Bitcoin.[36]

Cryptocurrency advocates and journalists like to talk about the "market cap" of crypto. It is calculated by the total number of coins or tokens in existence multiplied by today's price. This is a fictitious number that is not particularly relevant to anything, because it does not represent money that was put into the cryptocurrency and it is not a realizable value like a company market cap. Moreover, it does not affect prices, in reality, it is just an easily-calculated number that sounds good in a headline. Trading is so thin in any crypto, even Bitcoin, that you could never realize a fraction of the number. In order to compare interest and activity in crypto assets, it is necessary to compare trading volumes, if numbers for those actually exist.[37]

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[33] *Ibid.*
[34] "DafuqCoin, the first malware coin." Cryptocurrency Times (blog), 4 May 2014
[35] Richiela. "READ ME NOW! – dafuqcoin is a trojan – pool operators/exchanges beware". Bitcointalk.org Bitcoin Forum > Alternate cryptocurrencies > Altcoin Discussion, 22 April 2014.
[36] David Gerard, *Attack of the 50 Foot Blockchain: Bitcoin, Blockchain, Ethereum and Smart Contracts,* 2017 pp 169
[37] David Gerard, *Attack of the 50 Foot Blockchain: Bitcoin, Blockchain, Ethereum and Smart Contracts,* 2017 pp 170

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Following are examples of cryptocurrencies that are different in their utility and structure.

Litecoin

Litecoin is the "me too" coin. It hasn't many interesting stories, but it was the most prominent altcoin before the first Bitcoin bubble burst; for a few years, sites like the Pirate Bay that accepted Bitcoin donations often also accepted Litecoin donations. It was called as "the silver to Bitcoin's gold." Litecoin can be used as a means of payment, a token. The main difference from Bitcoin is a different hash designed to be resistant to GPU mining (though ASICs eventually came out) and shorter block time.

Litecoin's price went up with Bitcoin's until 2013, the price crashed with Bitcoin's, and during 2014 it declined from its peak of $42 (spot prices of $68 on some exchanges) to $1.50. It hovered around $4 until it hit $30 in the second bubble – altcoin prices tend to track Bitcoin's price – and the small current volume is Chinese speculators.

Dogecoin

Another example of cryptocurrency is Dogecoin, which was introduced in December 2013, originally as a joke based on the "Doge" Shiba Inu Internet meme.[38] The idea was silly. The creators wanted to have some fun with cryptocurrency that is cheap enough to mess around with.

Dogecoin was one of many cryptocurrencies that got caught up in the hype of the Bitcoin mess and rapidly gained in price, which peaked in January 2014 at 0.17 of a cent per DOGE.[39] Interestingly enough, Dogecoin rose even though there are almost no use cases (some people used it to tip other Reddit commenters) and the fact that it can be exchangeable for only bitcoins. Now, the Dogecoin Foundation which was started by Ben Doernberg and the coin's technician Jackson Palmer raised nearly $30,000 of Dogecoins in January. With this money, they started charity foundations and had cases when they send the Jamaican bobsled team to the 2014 Winter Olympics and raised $32,000 for clean water in Kenya.[40]

Ethereum

For this research, one of the most important cryptocurrencies is Ethereum. It was proposed by Vitalik Buterin (an early Bitcoiner and co-founder of Bitcoin Magazine) and developed by

[38] Chen, Adrian. *"Doge Is An Actually Good Internet Meme. Wow"* (November 7, 2013)
[39] *http://dogecoin.com/*
[40] *Ibid.*

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Buterin, Gavin Wood, Jeffrey Wilcke and others. With Etherum the world was introduced to a tool such as smart contracts on a blockchain. Those smart contracts are programs that are triggered to run automatically when condition precedent is met in a transaction between two entities. To compare, Bitcoin can be viewed as an Excel spreadsheet, whereas Ethereum is again a spreadsheet, but with macros.

Transactions and smart contract programs (which they call "dapps," short for "distributed applications") require gas (which is a certain amount of the currency token, ether, abbreviated ETH). This is paid to the miner who runts the computer necessary for the transaction or smart contract. The mechanisms also prevent smart contracts from running forever.[41]

Ethereum's pitch has always been ridiculously aspirational. It's a "smart contracts platform," it's a "worldwide distributed computer," at one point Wikipedia called it "Web 3.0," at another a "publishing platform." Anything other than a cryptocurrency. To this day, drive-by editors occasionally swing by the Ethereum article in Wikipedia to remove the word "cryptocurrency."[42]

Due to this, Etherum can be viewed as an asset in the form of a share, which will be put it in a different legal framework.

Ethereum has a current maximum of about 14 transactions per second[43] (Bitcoin's is 7 TPS). As at mid-2017, it's running about 2-3 TPS, having rapidly risen over 2017; popular dapps already fill the blocks and clog the system for hours at a time, such as the Bancor and Status ICOs. The community behind Ethereum seems to have faith in the Ethereum Foundation, so a fix is more likely to be accepted without a Bitcoin-style community civil war, and backward-compatibility-breaking changes are a regular occurrence and will most likely be managed without controversy.[44]

The blockchain developers have always stated that Ethereum is precisely experimental and unfinished (without taking into account the hundreds of millions of dollars in ether swilling

[41] David Gerard, *Attack of the 50 Foot Blockchain: Bitcoin, Blockchain, Ethereum and Smart Contracts,* 2017, pp 174
[42] *Ibid.*
[43] "gas" is 0.00001 ETH. Transaction throughput will be gas limit divided by block time, divided by 21,000 for a single transaction. The gas limit is variable, but is currently around 4,7000,000. So 4,700,000/16 seconds/21,000 = 13.99 transactions per second.
[44] David Gerard, *Attack of the 50 Foot Blockchain: Bitcoin, Blockchain, Ethereum and Smart Contracts,* 2017, pp 175

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around in it) and that the promised functionality will need years of work.[45] They occasionally boggle at people treating it as much more of a finished product than they do.

Ethereum advocates talk up corporate adoption by Microsoft and other companies – it's a popular choice of platform for business blockchain trials, and its smart contract functionality is reused by a lot of other blockchain software – but this is adoption of the software to run separate in-house blockchains, not adoption of the public Ethereum chain and currency.[46]

Buterin's quantum quest

Before Ethereum, Vitalik Buterin put considerable effort in 2013 into trying to convince investors to fund him to build a quantum computer. Vitalik wanted to use a quantum computer to solve computationally impossible problems that can't be done practically on an ordinary computer, such as reversing cryptographic hash functions.[47]

In reality, Buterin and Ash's initial plan was to use a simulated quantum computer not to revolutionize computation and change the world – but only to use it to mine bitcoins faster than anyone in order to capture the field.[48]

Sadly for them, they failed to secure sufficient funding to in order to break mathematics of current age. There are a discussion going on in professional forums that the investors were probably put off by the questions from the community on how, quite apart from the mathematical implausibility, this would destroy any confidence in Bitcoin and kill the "golden goose."[49]

It's worth noting that a practical quantum computer would be able to solve the SHA-256 hash used in Bitcoin somewhat faster than an ordinary computer[50] – but it could also quickly break the conventionally-unbreakable public-key encryption that is the most important aspect of

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[45] Joseph Young. "*Ethereum Launches; But Leaked Chat Says Project Needs 'Years More'*". CoinTelegraph, 1 August 2015

[46] David Gerard, *Attack of the 50 Foot Blockchain: Bitcoin, Blockchain, Ethereum and Smart Contracts,* 2017, pp 178

[47] *"Vitalik's Quantum Quest".* Bitcoin Error Log (blog), 16 August 2016

[48] David Gerard, *Attack of the 50 Foot Blockchain: Bitcoin, Blockchain, Ethereum and Smart Contracts,* 2017, pp 179

[49] *Ibid.*

[50] O(sqrt(N)) rather than O(N), per Grover's algorithm. Which is a pretty good speedup for as long as nobody else knows you have a quantum computer. *Ibid.*

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protection of a user's Bitcoin balance. So in case of a person secretly owning a quantum computer, one could mine a bit faster, or steal everyone else's bitcoins.[51]

ICOs: magic beans and bubble machines

With the development of blockchain technology and the drastic popularity of cryptocurrencies, a new concept came to be: "buy our premined altcoin" or "ICO" ("Initial Coin Offering" or "Initial Crowdfunding Offering"). The ICO is basically an Initial Public offering, but with coins instead of shares. These are typically tokens running on the Ethereum blockchain, usually encrypted as a smart contract.[52]

This process does not involve mining. Instead, the broadcaster creates a smart contract that holds a number of tokens. Then the tokens are sold in portions. The systems allow to hold a centralized control over the tokens at the same time trading, and the exchange remains simple and accessible. One of the examples of ICO is Venezuela.[53]

Davit Gerard, in his book on Attack of the 50 Foot Blockchain, argues that ICO makes sense for crowdfunding in only limited conditions, where the problem lies in a technical issue that requires decentralized, cryptographically verified tokens. Token offerings have been around a for quite some time. However, they popularity grew during the second wave of blockchain bubble. The main reason is the need for fast and untraceable funding; however, in reality, the practice shows that the tokens are just traded on the exchanges as commodities and not as securities. The creators then cash in. The value proposition for buyers is, as for the creators, easy money and no responsibility.

For example, Bancor's ICO[54] raised $144 million without doing the usual due diligence that any company goes through when going for Initial Public Offering. This method is clearly easier and more profitable for specific types of a seller than the IPO, because these tokens and

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[51] David Gerard, *Attack of the 50 Foot Blockchain: Bitcoin, Blockchain, Ethereum and Smart Contracts,* 2017, pp 180

[52] Amy Castor *"Ethereum 'Tokens' Are All the Rage. But What Are They Anyway?"* CoinDesk, 17 June 2017

53 This Is Why The Venezuela Cryptocurrency Matters Forbes Welcome, Forbes.com (2018), https://www.forbes.com/sites/jonmarkman/2018/03/20/this-is-why-the-venezuela-cryptocurrency-matters/#26eb09594a56 (last visited May 17, 2018).

54 Bancor official website. https://www.bancor.network/discover

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ICO do not provide actual shares, and the purchasers have no influence or governance power over the funded project because even in theory ICO is not IPO, it is crowdfunding.[55]

Another example is Digix, the first token on the Ethereum blockchain itself, is a cryptocurrency backed by gold.[56] Another one is Golem, which offers a "decentralized" market in computing world, like Amazon Web Services. However, the only means of payment is their token.[57] Gnosis is another example, where the initiative offers a semiautomatic prediction markets by producing and offering their token.[58] One of the bizarre projects is SingularDTV, where the aim is to fund a TV show about the Singularity where a Caribbean island adopts Ethereum as its currency and Austrian economics works.[59]

However, the person who initiates ICO's understands and accepts that the creation of the token and it's future development can be a failure because of many economic and not only reasons, including the absence of interest from the public, lack of funding, a deficit of commercial success or prospects (e.g., competing projects). Therefore, the owner of the idea must understand that there is no guarantee that, even if the project is highly developed and already launched, there will be any benefits through the ICO.[60]

One of the examples of a company that realizes the risks mentioned above and takes precautionary measures is EOS. It was created and founded by blockchain entrepreneur Danny Larimer. The EOS is marketing the product directly to the general public, with advertisements on the sides of London taxis.[61] Here's how the white paper describes it:[62]

"The EOS.IO software introduces a new blockchain architecture designed to enable vertical and horizontal scaling of decentralized applications. This is achieved by creating an operating system-like construct upon which applications can be built. The software provides accounts, authentication, databases, asynchronous communication and the scheduling of

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[55] David Gerard, *Attack of the 50 Foot Blockchain: Bitcoin, Blockchain, Ethereum and Smart Contracts,* 2017, pp 182
[56] https://www.dgx.io/dgd/
[57] "Crowdfunding Whitepaper". The Golem Project, November 2016.
[58] Alyssa Hertig. *"ICO Insanity? $300 Million Gnosis Valuation Sparks Market Reaction"*. CoinDesk, 25 April 2017
[59] A survey of the top 8 ICOs at the time: Lyle Cantor. *"A Tour of the Ethereum Token Bubble"*. 18 June 2017
[60] David Gerard, *Attack of the 50 Foot Blockchain: Bitcoin, Blockchain, Ethereum and Smart Contracts,* 2017, pp 186
[61] Edan Yago. "Ads on Taxis – Is EOS.io the PETS.com of ICO?" Twitter, 11 July 2017
[62] "EOS.IO Technical White Paper". EOS.IO

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applications across hundreds of CPU cores or clusters. The resulting technology is a blockchain architecture that scales to millions of transactions per second eliminate user fees, and allows for quick and easy deployment of decentralized applications."

The specific of the EOS tokens lies in the fact that they do not have any uses, rights, attributes, purpose, functionalities or features, express or implied, including, without limitation, any uses, purpose, attributes, functionalities or features on the EOS project platform.[63]

In order to understand the legal documentation behind EOS, it is necessary to read EOS Token Purchase Agreement.[64] EOS assures that tokens do not constitute a security. However, Securities and Exchange Commission in the US does not allow its citizens to buy EOS tokens. Moreover, the tokens are defined as NOT useful in any manner whatsoever, because forty-eight hours after the end of the token distribution period, there will no longer be a permission to transfer. In particular, the buyer agrees not to purchase them for gamble or investment. EOS also provides a disclaimer, stating that in case of any legal problems caused by a user buying these officially worthless things, shall be compensated to EOS. Even with this harsh regulations posed on the market, users or other crypto fans lined up to but the tokens.[65]

Another case regarding the legality of ICO rose in China. Being driven by the fear of staying behind or missing out Chinese speculators started to aggressively engage in ICOs, by agreeing to questionable proposals. The situation went out of control when exchange BTC38 refused to put new tokens up and even warned that illicit fundraising could carry the death penalty in China.[66]

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[63] David Gerard, *Attack of the 50 Foot Blockchain: Bitcoin, Blockchain, Ethereum and Smart Contracts,* 2017, pp 186
[64] "EOS Token Purchase Agreement". EOS.IO.
[65] CoinHoarder. "EOS – Asynchronous Smart Contract Platform - (Dan Larimer of Bitshares/Steem)". Bitcointalk.org Bitcoin Forum > Alternate cryptocurrencies > Altcoin Discussion, 6 May 2017
[66] Red Li. "Exchanges Alerts ICO Scams and Illegal Fundraising in China Punishable by Death". 8BTC, 26 June 2017

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History doesn't repeat, but it does rhyme. One of the most famous shares offerings from the South Sea Bubble of 1719-1720 was "A company for carrying on an undertaking of great advantage, but nobody to know what it is."[67]

The person behind the idea stated in his prospectus that the required capital was half a million, consisting of five thousand shares of 100 pounds each and deposit 2 pounds per share. Therefore, every subscriber, upon paying his deposit, will be entitled to 100 pounds per annum per share. Moreover, Charles did not give sufficient clarification or any information on the process of making a profit. He only gave mere promise that within a month full particulars should be duly announced. Later he made the call for the remaining 98 pounds of the subscription. Eventually, the next morning, an office in Cornhill was opened, and the crowds of people invaded the front desk. At the end of the working day, it turned out that people subscribed for no less than one thousand shares. Moreover, all the deposits were paid. Thus, in five hours, the guy "winner" 2000 pounds. He was philosopher enough to be contented with his venture and set off the same evening for the Continent. He was never heard of again.

One of the most successful ICO remains PonzICO,[68] a piece of "blockchain performance art" wherein earlier contributors are paid directly from later contributors, with the founder taking a meager 50% off the top. His pitch – "In today's age, it seems better to promote the plausibility of future profit rather than waste energy on actually delivering."[69]

To sum up, cryptocurrencies can be utilized very differently. Some of them serve as a means of payment, some of them represent shares/bonds. Further, in the paper, we are going to discuss under which category of state regulation a cryptocurrency will fall depending on classification and utility.

Other use for cryptocurrency and blockchain[70]

Blockchain technologies are useful not only for the cryptocurrency market but also for business solutions and for governmental implementations.

[67] Charles Mackay, Memoirs of Extraordinary Popular Delusions and the Madness of Crowds, chapter 2. "The South-Sea Bubble".
[68] https://ponzico.win/
[69] Josh Cincinnati. "PonzICO: Let's Just Cut To The Chase". 12 May 2017.
[70] NEM enterprises official website, https://nem.io/enterprise/use-cases/

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One of the companies that introduced blockchain services is NEM enterprise. The company offers solutions for financial services, business management, secure and protected record keeping and messaging and other decentralized organizational tools.

Firstly, blockchain can be utilized as a means of financial payment, where instant payment can be done quickly to anywhere in the world. The key factor that NEM provides is the easy accessibility of private and public blockchains. The technology expands to the moile payment system called XEM, which allows same transactions with very low fees that do not alter the main aim of cryptocurrency: to create a p2p transaction. Equity markets can also benefit from the technology. The market poses a very inefficient system when it comes to payment, post-trade clearing, and settlement. In practice, trade matching occurs at the rate of hundreds and thousands of transactions per second, but clearing and settlement of stock require more than two days to complete. In particular, the equity market should consider a complete system remodeling as the current systems and practice methods are based on legacy process practices that are outdated. NEM offers a blockchain technology that can serve as a suitable core component to re-design the equity market ecosystem which, in its turn could save the industry billions of dollars a year in fees and operational expenses.

Secondly, companies can use blockchain in management field. For example, the accounting or loyalty rewards can be completely automated. All transactions, when done through the technology are preserved and are kept untamperable. Businesses that run retail, credit card, grocery store, hotel, casino, beverage, and the airline can use blockchain as a means of loyalty rewards points system. The points can have a cash value, which is why it is important to treat them as a form of money (the risks and legal frameworks of blockchain as a form of money are examined in Chapter 3). The technology brings extra security, irreversibility, accuracy and most importantly speed to these systems, reducing fraud and mistakes. Moreover, the issuer gets the opportunity to follow the trail of every reward point generated, which allows performance of accurate research showing the response from customers to the incentives. The company Hitachi is one of the users of blockchain which has over 1.5 million users. The Republic of Georgia also uses bitcoins blockchain to store and track real estate registration in cadastre.

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Thirdly, NEM suggests using the blockchain in encryption of messaging, creating authentic notarization system, ensuring corporate compliance, etc. In particular, NEM can instantly generate a timestamped hash (cryptographic signature) of any document or file which is stored permanently on the blockchain, so the user receives the information for comparing any future versions against it. The method works with patents, trade registrations, licenses, and anything that should be notarized. An apostille is one such notarization app that's already up and running. It allows instant cryptographic proof of any file's authenticity. It also records ownership data and a timestamp to prove who recorded it and when.

Fourthly, the most important aspect of blockchain use is the voting system. NEM claims to provide voting security on par with the best financial grade security software. Particularly, votes cannot be tampered with, because there is a permanent and complete record of every entry and change of a person, her/his data. It's appropriate for governments and institutions that require automation, speed, security, and transparency of voting records. Privacy can be maintained with encryption, but in case of a vote, once it is entered, is instantly counted and permanently auditable.

Risks

Despite the appealing features, cryptocurrencies also have inherent risks. For example, investing in cryptocurrency leads to uncertainty because of exchange rate volatility. The recent developments in the price of Bitcoin serve as an example of steep value fluctuation.[71] The users of cryptocurrencies can also become objects for hackers, which will target unprotected wallets on users' computers.

However, the riskiest feature of cryptocurrency is the uncertain legal framework in which it operates. For entrepreneurs trading with cryptocurrencies becomes an uncertain and risky business activity that may or may not create additional obligations, such as tax liabilities. In order to gather more information and understand a pattern of behavior of states, the following chapter will examine several major approaches by the state regarding specifically taxation methods.

[71] EUROPEAN CENT. BANK; Adrianne Jeffries, The Bernie Madoffs of Bitcoin? As Market Heats Back Up, Virtual Hedge Funds Claim Fantastical Profits, VERGE (Aug. 15, 2012, 2:27 PM), http://www.theverge.com/2012/8/15/3243200/bitcoin-ponzi-schemes-savings-and-trust

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CHAPTER 2: STATE REGULATIONS

With the huge amount of people engaging in cryptocurrency dealings and the speed of evolvement of cryptocurrency markets, it is hard for state legislators to catch up with the process. In order to reach the market, States show several approaches towards cryptocurrencies. They either create separate legislation that defines and regulates cryptocurrencies and their tax regimes, or they apply existing laws to cryptocurrency situation without creating additional norms. Countries like USA, Australia and many European countries apply a mixed method, where no new legislation is introduced but instead create regulatory guidelines, whereas countries like Belarus, Japan or Estonia use separate legislature designed for cryptocurrencies. Depending on the approaches of the states it is possible to understand the applicable taxation regime. In particular, in this chapter, we will look into definitions of cryptocurrencies in different states and thus will be able to categorize taxation methods.

Recent Developments in the Regulation of Cryptocurrencies in the USA

The USA undertook the relatively aggressive approach in 2013 when The Financial Crimes Enforcement Network (hereinafter "FinCEN") issued a guidance clarifying anti-money laundering rules regarding cryptocurrencies.[72] Previously, FinCEN issued regulations that governed money services business (hereinafter "MSBs") which attempted to clarify the possibility of participants to cryptocurrency transactions tobe considered engaged in "money transmission"[73] and whether they will be subject to the MSBs rule.[74] The importance of guideline mentioned above and the regulation is in the definition section, where the guidance begins to distinguish the "real" currency from "crypto" currency.[75] The real currency has a status of legal tender and is in the coin and paper money, whereas cryptocurrency does not hold the status of legal tender and thus is not real. However, the guideline follows to say that

[72] Fin. Crimes Enforcement Network, U.S. Dep't of the Treasury, Application of FinCEN's Regulations to Persons Administering, Exchanging, or Using Virtual Currencies, FIN-2013-G001 (Mar. 18, 2013) [hereinafter FinCEN Guidance], available at http://www.fincen.gov/statutes_regs/ guidance/pdf/FIN-2013-G001 .pdf.
[73] FinCEN defines "money transmission" as "the acceptance of currency, funds, or other value that substitutes for currency from one person and the transmission of currency, funds, or other value that substitutes for currency to another location or person by any means."
[74] Bank Secrecy Act Regulations; Definitions and Other Regulations Relating to Money Services Businesses, 76 Fed. Reg. 43585 (July 21, 2011) (to be codified at 31 C.F.R. pts. 1010, 1021 & 1022).
[75] FinCen, supra note 34

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some cryptocurrencies can be considered as "substitute" for real money or a "convertible cryptocurrency."[76] Due to this definition, it can be presumed that a transaction with "convertible cryptocurrency" can be viewed as "money transmission," which will lead to the application of FinCEN MSBs.

To fully understand the taxation methods we are going to look into the US Internal Revenue Service (IRS) Virtual Currency Guideline[77] where it is clearly stated that for US Federal Tax purposes cryptocurrency is treated as a property (NOT a currency) and thus general rules of property transactions apply. Following the published notice[78] by IRS, it becomes evident that "convertible cryptocurrency" transactions (for example sale of convertible cryptocurrency, or the use of convertible cryptocurrency to pay for goods or services in a real-world economy transaction) will create tax liability and this will result in tax consequences. Moreover, upon exchange of cryptocurrency to for other property, the taxpayer must calculate the gains and losses and thus determine whether they will have a taxable gain and the loss deductible. Also, cryptocurrency miners will be subject to income tax, because according to the IRS notice Q-8 at the moment of successful mining of cryptocurrency the user receives income in the amount of fair market value of the cryptocurrency.

Of course, IRS will be able to impose those taxes only in case of voluntary disclosure of cryptocurrency transactions by the users. The FinCEN regulation compels users to disclose information. However, they lack the resources and necessary legal instruments for forcefully obtaining information on existing transactions.

Recent Developments in the Regulation of Cryptocurrencies in Germany

There are two institutions that regulate cryptocurrency related transactions in Germany: BaFin (Bundesanstalt für Finanzdienstleistungsaufsicht) and BMF (Bundesministerium für Finanzen). BaFin declared that the accepted definition for cryptocurrency is "unit of account" or a sort of "private money." Thus inevitably cryptocurrency becomes a subject to private income taxation regime in Germany.[79] In particular, the definition leads to the fact that

[76] FinCen, supra note 34
[77] IRS Virtual currency guidance, https://www.irs.gov/newsroom/irs-virtual-currency-guidance
[78] Notice 2014-21, https://www.irs.gov/pub/irs-drop/n-14-21.pdf
[79] Farivar, C. (2013, August 18). Germany recognizes Bitcoin as a "private money," subject to capital gains tax. Retrieved March 7, 2017, from https://arstechnica.com/tech-policy/2013/08/germany-recognizes-bitcoin-as-a-private-money-subject-to-capital-gains-tax/

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persons (physical or legal) have to pay an income tax on their realized cryptocurrency gains. Realization means selling bitcoin for Euros or Dollars, exchanging them for alternative coins or goods and services. Every single realization of gains is a tax relevant event and therefore needs to be properly recorded. Gains up to 600 EUR/year are tax exempt, but all gains from similar deals such as trading or factoring. For instance, if A buys bitcoins for 800 EUR and sells them half a year later for 4.500 EUR A would have a taxable income of 3.700 EUR. Therefore 3.700 EUR – 600 EUR is added to her yearly income. If there is a tax exemption, then nothing needs and should be declared. If there is no tax exemption, however, every taxable gain needs to be declared.[80] Sells of cryptocurrencies without gains, with losses or of cryptocurrencies that have been held for more than a year do not need to be reported. In addition, any expenses which occur by conducting a bitcoin exchange are allowed as a deduction.

Recent Developments in the Regulation of Cryptocurrencies in Australia

Generally, there is no income tax or Goods and Services Tax (The GST is a value-added tax of 10% of most goods and services sales in Australia) implication for people who buy for their goods and services for their personal use with cryptocurrencies. In this context, any capital gains or losses from selling disposal are ignored as long as the cost of the cryptocurrency amounts to $10.000 or less. If currencies are used for goods and services which are provided as part of one's own business, they have to be recorded and are part of the ordinary generated income. The same rule applies to for barter transactions. For example, if cryptocurrencies are received from customers as a mean of payment, the business itself will be charged GST on the bitcoin amount received.[81]

If cryptocurrencies are used to pay for goods and services (business items incl. trading stocks) the business is entitled to a deduction based on the arm's length value of the item acquired, then capital gains in Australia are reduced by the amount that is included in the assessable income as ordinary income. This means, that if a salary or wage is paid in cryptocurrencies instead of Australian dollars (in case of a valid salary sacrifice arrangement), this payment represents a fringe benefit and the employer itself is subject to the provisions of the Fringe

[80] Heine, S. (2015, June 29). Bitcoin: Virtuelle Währung, reale Steuern. Retrieved March 7, 2017, from https://www.smartsteuer.de/blog/2015/06/29/bitcoin-virtuelle-waehrung-reale-steuern/

[81] Tax treatment of cryptocurrencies in Australia https://www.ato.gov.au/general/gen/tax-treatment-of-crypto-currencies-in-australia---specifically-bitcoin/

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Benefits Tax Assessment Act. However, if this kind of arrangement does not exist the remuneration is regarded as a normal salary and the employer has to meet the normal pay as you go obligations (CryptoCoinsNews, 2016).

Recent Developments in the Regulation of Cryptocurrencies in Belarus

Alongside Venezuela, Belarus is one of the countries that starting 2017 October has its own cryptocurrency, which is weirdly enough decentralized and free of any kind of central governmental authority.

The President of Belarus signed a decree ("On the development of the digital economy") that legalizes cryptocurrencies, initial coin offerings, and smart contracts.[82] The decree creates a High Technology Park, whose residents will be able to perform various operations with cryptocurrencies.[83] The Park is a special economic zone that is working in a special tax regime and legal regime. The official legal counsel of the Park declared that *"Activity such as mining, acquisition, alienation of tokens, carried out by individuals, are not entrepreneurial activities, and tokens are not subject to declaration. At the same time, until 2023, activities related to mining, the creation, acquisition, and alienation of tokens are not taxed."*

Summary

It can be concluded that every country's approach towards cryptocurrency is different. The Some countries decided to take on a hostile approach by banning their citizens from buying cryptocurrencies that run blockchain. The USA is one of the countries that have the ability and the motivation to impose responsibility on citizens and legal entities. Countries that use this method can be classified as extremists.

Other countries, mostly European countries, undertook a different approach, where some regulations exist. However, they do not fully restrain free movement or entrepreneurial startup activities in their territories. Germany and Estonia are examples of those countries, where the

[82] Tax Free Belarus,Starting March
https://news.bitcoin.com/cryptocurrencies-activities-legal-tax-free-belarus-starting-march/
[83] Why would authoritarioan Belarus Liberalize Cryptocurrencies
https://www.washingtonpost.com/news/monkey-cage/wp/2018/01/25/why-would-authoritarian-belarus-liberalize-cryptocurrencies/?utm_term=.dcd4572ea871

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government “keeps an eye” on cryptocurrency developments. These countries are moderate in their actions, and they realize that being moderate is currently the best solution there is.

Another extreme is the absolute freedom provided by governments. Belarus, for example, created a zone where entities that want to engage in ANY cryptocurrency or blockchain activity, have ultimate freedom. There are no apparent regulations, nor are there any supervisionary precautions regarding that zone. This creates an uncertain and unregulated circumstance, where the government in future will not be able to control and restrain potential criminal activity.

In the final chapter of this paper, I am going to discuss the most suitable method for the Republic of Armenia and will give recommendations in that regard.

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CHAPTER 3: RECOMMENDATIONS FOR REPUBLIC OF ARMENIA ON RESPECTIVE POLICIES

In this chapter, the discussion will include regulation of cryptocurrency in Armenia. For that purpose, we are going to analyze possible definitions for cryptocurrency under Republic of Armenia Tax code (hereinafter "**Tax Code**")[84] and Civil Code (hereinafter "**Civil Code**")[85]

It was already mentioned that cryptocurrencies and blockchain technologies could be used in almost every sphere. Taking into account that fact it is necessary to view cryptocurrency and the technology behind it from several points of view. In particular, as mentioned in chapter 2 there are two main directions: Cryptocurrency as an asset and as a currency.

Cryptocurrency as an Asset

As per to the discussion in the first chapter of this paper, there are various types of cryptocurrencies that have different utilities. By using the analogy method of comparison, it became evident that the essence of the product was similar to the share or security (ethereum), which is why it can be considered as an asset. Following the logic of state regulations mentioned in chapter 2, firstly it is necessary to look at a cryptocurrency as a property.

According to Article 132 point 1 of the Civil Code, property, including monetary means, securities and property rights are objects of civil rights. According to Article 133 point 1 of the Civil Code, objects of civil rights may be freely alienated or passed from one person to another, by the procedure of universal legal succession (succession, reorganization of a legal person) or in another way, unless they are removed from circulation, or their circulation is limited.

According to the Code Article 4 part 1 point 51 and 52 define property respectivelly: "***personal property of a natural person*** *— property for personal, family or home use belonging to a natural person by ownership right and subject to use for consumer purposes" and "**property of a natural person used for entrepreneurial activity** is not the personal property of a natural person, except for the cases provided by the Code"* point 15of the

[84] Tax Code of Republic of Armenia
http://www.translation-centre.am/pdf/Translat/HH_Codes/Harkayin_orensgirq_en.pdf
[85] Civil Code of Republic of Armenia
http://www.translation-centre.am/pdf/Translat/HH_Codes/CIVIL_CODE_en.pdf

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same article defines **assets** as *"**any property belonging to the taxpayer by the right of ownership, property right and personal non-proprietary right related to property right**"*. If we consider cryptocurrency as an asset, then we will follow the Code on the method of taxation.

Firstly, we have to look into Article 9 of the Code that defines necessary elements for a taxable event. In particular *"taxes […] shall be considered to be set if the following elements have been set, […] (1) scope of taxpayers; **(2) taxable object**; (3) tax base; (4) tax rate; (5) method of calculation of the tax; (6) procedure and time limits for paying the tax."* In the case of cryptocurrency, the taxable object is the transaction of alienation of property, such as selling the cryptocurrency or exchanging it. In this case, we have to go in accordance with Article 8 of the Code and apply profit tax under general tax rules of the Code in case of legal entity and personal income tax in case of a natural person.

Cryptocurrency as a Currency

The other way of treating cryptocurrency is defining it as money (aka currency). The first chapter examined examples of cryptocurrencies that are mainly used as a means of payment or exchange. Similarly, it can be concluded that some cryptocurrencies are money and should fall within the monetary framework of legislation. In particular, following definitions should be taken into account. **The Law on Currency Regulation and Currency Control** of Republic of Armenia Article 3 defines the types of currency value.

1. Types of property as currency value include:

a) currency of the Republic of Armenia means dram of the Republic of Armenia,

b) payment securities denominated in the currency of the Republic of Armenia,

c) foreign currency (foreign exchange),

d) payment securities denominated in foreign currency,

e) banking gold,

f) rights and obligations arising from currency values specified in this part, in monetary terms.

2. The currency of the Republic of Armenia is:

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a) legal tender, such as notes and coins (including souvenir coins) in circulation or out of circulation, but subject to exchange, issued by the Central Bank of Armenia, resources denominated in Armenian dram, which are available in accounts and deposits of the Republic of Armenia banks and their branches abroad, resources denominated in Armenian dram, which are available in accounts and deposits offoreign banks and other financial and credit organizations, pursuant to agreements signed by the Government and the Central Bank of the Republic of Armenia with the respective foreign counterparts on using the Armenian currency as legal tender.

3. Foreign currency (foreign exchange) means:

a) legal tender, such as notes and coins (including souvenir coins) in circulation or out of circulation, but subject to exchange, in one or several foreign countries,

b) resources denominated in foreign currency and international monetary units, which are available in accounts and deposits of the Republic of Armenia banks.

The Law on Payment and Settlement Systems and Payment and Settlement Organisations provide following definitions:

- electronic money is pecuniary value expressing a monetary claim against an issuer, which is:

- maintained in the electronic device;

- issued against monetary funds received, with a value not less than that of the electronic money issued;

- accepted as a means of payment by parties other than the issuer;

There is no applicable regulation in the Tax Code regarding currency taxation and any capital gain on the foreign currency is considered not taxable[86]. On the other hand, the exchange centers that have the license to buy and sell currencies are being taxed with a special method that is being regulated by the Central Bank of Armenia. However, by applying the above mentioned definition of the currency provided in the Law on Currency Regulation and Currency Control and the definition of the electronic money provided in the Law on Payment and Settlement Systems and Payment and Settlement Organisations, it is evident that without introducing amendments to the law the crypto asset may not be treated as currency or electronic money. This case scenario creates complications regarding an amendment to the

[86] This is the official clarification of MinFin of Republic of Armenia

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existing legal system. Despite this, it is highly unlikely to receive a positive opinion from Central Bank of Armenia regarding the status of cryptocurrency as money, as they see huge risks regarding decentralized and anonymous means of payment.

Recommendation

Considering the experiences of countries listed in Chapter 2, it becomes evident that the taxation and regulation of cryptocurrency can be done when overcoming the anonymity and secrecy of transactions done through cryptocurrencies. Taking into account the lack of technical resources and necessary legal regulations of the Republic of Armenia it will be unreasonable to force cryptocurrency miners and users to comply with mandatory disclosure rules. Which is why I propose to create a comfortable environment for business entities that will create incentives for miners and will increase voluntary disclosure of information on cryptocurrency transactions. Armenia already has experience of granting tax privileges to IT start-ups. Moreover, the recent Armenian Development Strategy – 2030 emphasizes the importance of Armenia to become a technologically advanced and progressive state: a Caucasus Silicon Valley.

Considering above mentioned, it will be my recommendation to give specific tax privileges for a certain amount of time to miners and users of cryptocurrencies by defining a 0% tax rate on Profit Tax and Personal Income Tax. This will incentivize possible investors in the field and will serve the overall goal of the development of the economy through mining parks and active user engagement.

The above mentioned can be done through an amendment in already existing Law on State Support to Information Technology Sector by adding mining and cryptocurrency trading in a necessary section of the law.

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CONCLUSION

It is evident, that blockchain technology and cryptocurrencies are on their way of invading every aspect of a person life, starting from the simple payment and ending with the registration of person birth, electoral history, death and even heritage. It is more than important to draft and implement sufficient and fair legal regulation regarding on taxation (and not only) in order to prevent from having disasters.

The tax implications of trade in cryptocurrencies, as broadly understood, are determined by their legal and economic nature. Different approaches undertaken by the states create uncertainties for investors engaging in cryptocurrency transactions. One must be aware that to a large extent this is an effect of the early developmental stage of digital currencies in the markets. Taxpayers who benefit from cryptocurrencies may be subject to unplanned tax obligations. The absence of sufficient regulations and practice in the area leads one to undertake actions leading to tax liabilities with special caution. To protect the capital interests of the taxpayers and to create incentives for voluntary compliance states need to aim at creating sufficient legal regulation with the adoption of tax privileges.

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BIBLIOGRAPHY

1. Peter L. Bernstein, The Power of Gold: The History of an Obsession 24 (2004)
2. European Central Bank, Virtual Currency Schemes 9 (2012)
3. Jonathan B. Turpin, Bitcoin: The Economic Case for a Global, Virtual Currency Operating in an Unexplored Legal Framework, 21 IJGLS 335-368 (Winter 2014)
4. Albert A. Foer, Op-Ed., Our $48 Billion Credit Card Bill, N.Y. TIMES, Apr. 21, 2010, at A27, available at http://www.nytimes.com/2010/04/21/opinion/21foer.html?_r=0.
5. Satoshi Nakamoto, Bitcoin: A Peer-to-Peer Electronic Cash System (2008)
6. Joshua Baron, Angela O'Mahony, David Manheim & Cynthia DionSchwarz, National Security Implications of Virtual Currency Chapter 2 (2015)
7. Joshua Davis, The Crypto-Currency, NEW YORKER, Oct. 10, 2011, at 62, for a thorough investigation into the true identity of Satoshi Nakamoto
8. Satoshi Nakamoto, Bitcoin: A Peer-to-Peer Electronic Cash System (2008)
9. Gavin Andresen, Bitcoin: The World's First Person-to-Person Digital Currency, BITCOIN TRADING (June 20, 2011)
10. Jonathan B. Turpin, Bitcoin: The Economic Case for a Global, Virtual Currency Operating in an Unexplored Legal Framework, 21 IJGLS 335-368 (Winter 2014)
11. Joseph Bonneau, SoK: Research Perspectives and Challenges for Bitcoin and Cryptocurrencies
12. Jan Lansky, Possible State Approaches to Cryptocurrencies, University of Finance and Administration in the Prague Czech Republic
13. Arvind Narayanan, Bitcoin, and Cryptocurrency Technologies: A Comprehensive Introduction, Princeton University Press (July 19, 2016)
14. Michael J. Rosenfeld, Stanford University and Reuben J. Thomas, The City College of New York, Searching for a Mate: The Rise of the Internet as a Social Intermediary, American Sociological Review 77(4): 523-547, 2012
15. Adrianne Jeffries, Miner Problem: Big Changes Are Coming for Bitcoin's Working Class, VERGE
16. Bitomat, Britcoin, Intersango, ExchangeBitcoin.com, Camp BX, Bitcoin7, VirtEx, VirWox, and WM-Center

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17. Nikolei M. Kaplanov, Comment, Nerdy Money: Bitcoin, the Private Digital Currency, and the Case Against Its Regulation 5 (Temple Univ. Legal Studies Research Paper, 2012)

18. BLOCKCHAIN, http://www.blockchain.info (last visited Aug. 6, 2013), for one example of an online-hosted wallet

19. EUROPEAN CENT. BANK, VIRTUAL CURRENCY SCHEMES 9 (2012), available at http://www.ecb.int/pub/pdf/other/virtualcurrencyschemes201210en.pdf

20. How Many People Use Bitcoin? Updated for 2018, available at https://www.bitcoinmarketjournal.com/how-many-people-use-bitcoin/

21. Joel Falconer, Bitcoin, the Peer-to-Peer Currency that Hopes to Change the World, NEXT WEB

22. The Tuesday Podcast: Bitcoin, NPR PLANET MONEY (July 12, 2011, 6:44 PM), http://www.npr.org/blogs/money/2011/07/13/137795648/the-tuesday-podcast-bitcoin

23. Martha Neil, My Clients Can Pay Me in Bitcoins; Criminal Defense Lawyer Says, A.B.A. J.

24. David Gerard, Attack of the 50 Foot Blockchain: Bitcoin, Blockchain, Ethereum and Smart Contracts, 2017

25. "DafuqCoin, the first malware coin." Cryptocurrency Times (blog), 4 May 2014

26. Richiela. "READ ME NOW! – dafuqcoin is a trojan – pool operators/exchanges beware". Bitcointalk.org Bitcoin Forum > Alternate cryptocurrencies > Altcoin Discussion, 22 April 2014.

27. David Gerard, Attack of the 50 Foot Blockchain: Bitcoin, Blockchain, Ethereum and Smart Contracts, 2017

28. Chen, Adrian. "Doge Is An Actually Good Internet Meme. Wow" (November 7, 2013)

29. http://dogecoin.com/

30. Joseph Young. "Ethereum Launches; But Leaked Chat Says Project Needs 'Years More'". CoinTelegraph, 1 August 2015

31. "Vitalik's Quantum Quest". Bitcoin Error Log (blog), 16 August 2016

32. Amy Castor "Ethereum 'Tokens' Are All the Rage. But What Are They Anyway?" CoinDesk, 17 June 2017

33. This Is Why The Venezuela Cryptocurrency Matters Forbes Welcome, Forbes.com (2018),

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https://www.forbes.com/sites/jonmarkman/2018/03/20/this-is-why-the-venezuela-cryptocurrency-matters/#26eb09594a56 (last visited May 17, 2018).

34. Bancor official website. https://www.bancor.network/discover

35. https://www.dgx.io/dgd/

36. "Crowdfunding Whitepaper". The Golem Project, November 2016.

37. Alyssa Hertig. "ICO Insanity? $300 Million Gnosis Valuation Sparks Market Reaction". CoinDesk, 25 April 2017

38. A survey of the top 8 ICOs at the time: Lyle Cantor. "A Tour of the Ethereum Token Bubble". 18 June 2017

39. Edan Yago. "Ads on Taxis – Is EOS.io the PETS.com of ICO?" Twitter, 11 July 2017

40. "EOS.IO Technical White Paper". EOS.IO

41. "EOS Token Purchase Agreement". EOS.IO.

42. CoinHoarder. "EOS – Asynchronous Smart Contract Platform - (Dan Larimer of Bitshares/Steem)". Bitcointalk.org Bitcoin Forum > Alternate cryptocurrencies > Altcoin Discussion, 6 May 2017

43. Red Li. "Exchanges Alerts ICO Scams and Illegal Fundraising in China Punishable by Death". 8BTC, 26 June 2017

44. Charles Mackay, Memoirs of Extraordinary Popular Delusions and the Madness of Crowds, chapter 2. "The South-Sea Bubble".

45. https://ponzico.win/

46. Josh Cincinnati. "PonzICO: Let's Just Cut To The Chase". 12 May 2017.

47. NEM enterprises official website, https://nem.io/enterprise/use-cases/

48. EUROPEAN CENT. BANK; Adrianne Jeffries, The Bernie Madoffs of Bitcoin? As Market Heats Back Up, Virtual Hedge Funds Claim Fantastical Profits, VERGE (Aug. 15, 2012, 2:27 PM), http://www.theverge.com/2012/8/15/3243200/bitcoin-ponzi-schemes-savings-and-trust

49. Fin. Crimes Enforcement Network, U.S. Dep't of the Treasury, Application of FinCEN's Regulations to Persons Administering, Exchanging, or Using Virtual Currencies, FIN-2013-G001 (Mar. 18, 2013) [hereinafter FinCEN Guidance], available at http://www.fincen.gov/statutes_regs/ guidance/pdf/FIN-2013-G001 .pdf.

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50. Bank Secrecy Act Regulations; Definitions and Other Regulations Relating to Money Services Businesses, 76 Fed. Reg. 43585 (July 21, 2011) (to be codified at 31 C.F.R. pts. 1010, 1021 & 1022).
51. IRS Virtual currency guidance, https://www.irs.gov/newsroom/irs-virtual-currency-guidance
52. Notice 2014-21, https://www.irs.gov/pub/irs-drop/n-14-21.pdf
53. Farivar, C. (2013, August 18). Germany recognizes Bitcoin as a "private money," subject to capital gains tax. Retrieved March 7, 2017, from https://arstechnica.com/tech-policy/2013/08/germany-recognizes-bitcoin-as-a-private-money-subject-to-capital-gains-tax/
54. Heine, S. (2015, June 29). Bitcoin: Virtuelle Währung, reale Steuern. Retrieved March 7, 2017, from https://www.smartsteuer.de/blog/2015/06/29/bitcoin-virtuelle-waehrung-reale-steuern/
55. Tax treatment of cryptocurrencies in Australia https://www.ato.gov.au/general/gen/tax-treatment-of-crypto-currencies-in-australia---specifically-bitcoin/
56. Tax Free Belarus, Starting March https://news.bitcoin.com/cryptocurrencies-activities-legal-tax-free-belarus-starting-march/
57. Why would authoritarian Belarus Liberalize Cryptocurrencies https://www.washingtonpost.com/news/monkey-cage/wp/2018/01/25/why-would-authoritarian-belarus-liberalize-cryptocurrencies/?utm_term=.dcd4572ea871
58. Tax Code of Republic of Armenia http://www.translation-centre.am/pdf/Translat/HH_Codes/Harkayin_orensgirq_en.pdf
59. Civil Code of Republic of Armenia http://www.translation-centre.am/pdf/Translat/HH_Codes/CIVIL_CODE_en.pdf

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