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WHETHER PAYMENT BY CRYPTOCURRENCIES IS LEGAL?

Master's Thesis

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I also would like to thank the developers of the new payment methods. Because of them the civilization keeps moving forward and solves imperfections of the current types of money and payment methods.
LIST OF ABBREVIATIONS

The work is based by using abbreviations. Below are indicated the abbreviations and their meanings, which means exactly what stated below, unless the context requires or specifically stated otherwise:

- **ECB**  - European Central Bank;
- **EBA**  - European Banking Authority;
- **FATF** - The Financial Action Task Force;
- **CJEU** - Court of Justice of the European Union;
- **CCLR** - The Constitutional Court of the Republic Lithuania;
- **CC**  - Cryptocurrencies, including Bitcoin;
- **Constitution** - The Constitution of the Republic of Lithuania;
- **Civil code** - Article 1.100 of the Civil code of the Republic of Lithuania;
- **Bitcoin** - CC, described in whitepaper “Bitcoin: A Peer-to-Peer Electronic Cash System”;
- **Blockchain** - a digitized, decentralized, records keeping technology public ledger technology.
ABSTRACT

The aim of this master’s thesis is to examine whether payment by using CC is legal. The essence of the legal problem under the consideration is the norm of the Civil code which distinguishes centralized money issuance as the key feature of money. Authorities in the European Union recognize CC as digital money. However, the CC is not considered as money under the norm of the Civil code. Therefore, the research investigates whether the norm of the Civil code breach the Constitutional of the Republic of Lithuania.

To achieve the purpose of this master’s thesis, the research is constructed in 4 main parts by which the following tasks must have been completed. Firstly, the evolution of the payment market, the legal definition of money and the requirements for payment transactions has been reviewed. Secondly, the technical parameters, the prevalence and the legal position of the European Union authorities of the CC have been revealed. Thirdly, the research on analyzing of the Civil code compliance to the Constitution has been performed. Ultimately, the results of the research should be compared in the terms of CC and the legality of the monetary payments by using CC has been made.

The final conclusion show that by the evaluation of the nature of money from the legal doctrine, the technical parameters of the CC, as well as the position of the European authorities, the norm of the payments by using a CC unreasonably violates the constitutional freedom of economic activity and initiative provided by the Constitution of the Republic of Lithuania. In respect to this, the norm of the Civil code is considered to be outdated and should be changed. Therefore, payments made by using CC ought to be recognized as legal monetary payments.
SANTRAUKA


Antroje tyrimo dalyje buvo atskleisti techniniai kriptvaliutos parametro, paplitimas ir Europos Sąjungos autoritetų nuomonė, susijusi su kriptovaliutos statusu. Pirmojo skyrius analizė parodė, kad kriptovaliuta pasižymi decentralizuotumu, išskirstymumu, anonimiškumu, nepriklausomumu, visišku saugumu ir pasitikėjimą užtikrinančiu mechanizmų. Buvo nustatyta, kad kriptovaliuta neturi centrinio subjekto, kuris gali būti veikiamas įstatymų leidėjo, įskaitant teisinių...
reikalavimų taikymą. Vienintelis reguliavimo būdas – reguliuoti ne technologijos veikimą, tačiau technologijos naudotojus, jų mokėjimo operacijas ir keityklas. Kriptovaliuta naudojama be jokių tarpininkų perkant prekes ar paslaugas bet kurioje vietoje globaliai. Antro šios dalies tyrino skyriaus išvadose buvo nustatyta, kad Europos Centrinis Bankas, Europos Bankininkysės Institucija ir kiti autoritetai Europos Sąjungoje savo nuomonė formuoja laikydamsi kriptovaliutų „skaitmeniniaus pinigus“ arba „skaitmeninė vertė išraška“. Europos Teisingumo Teismas kriptovaliutą vadina „valiuta“ arba „skaitmeniniaus pinigais“.

Taigi, lyderiaujanti pozicija yra laikyti kriptovaliutą kaip tam tikrą pinigų formą (skaitmeninius pinigus) arba valiutą. Šios tyrino dalies išvados reziumuotai parodė, kad kriptovaliuta yra visiškai naujas reiškinys, suteikiantis daugybė panaudojimo privalumų, tačiau ir reikalaujantis teisinės sistemos, kurioje galėtų pilnai funkcionuoti. Aitinkamai autoritetai, skirtingai nei galiojantis įstatymas, pripažįsta kriptovaliutą pinigais. Atlikus šioje dalyje analizuotų aspektų atskleidimą, antrasis tyrimo uždavinys buvo įvykdytas.

**Trečioje tyrino dalyje** buvo suformuota ir pasirinkta Lietuvos Respublikos Konstitucinio teismo bylų analizė kaip pagrindinė tyrino metodologija. Kaip iš pirmosios ir antrosios tyrino dalies buvo nustatyta, kriptovaliuta autoritetų laikoma ir faktiškai yra naudojama kaip tam tikrą pinigų formą, tačiau teisinis reguliavimas nėra neatsižvelgiant į centralizuotą pinigų leidimo požymį. Taigi, susidaro faktinė situacija, jog rinkoje yra matas, kuris faktiškai veikia kaip pinigai, tačiau jam nėra reguliuojanti teisės aktų. Tokes matas, dėl neatitikimo teisinių reguliavimų sąvokos, dirbtinai tampa turtu ar žaliavą.

Lietuvos Respublikos Konstitucinis teismas yra išaiškinęs, jog asmens ūkinė laisvė ir iniciatyva, tai teisinii galimybii visuma, sudarančia asmeniui savarankiškai priimti jo ūkinei veiklai reiklingus sprendimus, įskaitant, bet neapsiribojant sutarčių sudarymo laisvę. Teismas, formuodamas konstitucinę doktriną nurodo, jog viena iš sudėtingiausių teisės aktų yra bendras ūkis. Šis yra nepriklausomos veiklos principo daly, tai yra tarnavimu bendrai tautos gerovei. Iš atlikto analizės buvo nustatyta, jog bendra tautos gerovė reiškia visuomenei naudingų sričių reguliavimą. Buvo pastebėta, kad bendra tautos gerovė ne tik gali, bet ir turi būti ribojama teisinii reguliavimu. Nepaisant to, ribojimai privalo būti proporcingi ir nevaržyti asmenų ūkinės veiklos, įskaitant sandorių sudarymo laisvę.

mokėjimai. Taigi centralizuoto pinigų leidimo požymis, savo esme, neveikiamas kitų reiškinių, nelaikytinas neproporcingai ribojančiu asmenų ūkinės veiklos laisvę ir iniciatyvą. Atliekus Lietuvos Respublikos Konstitucinio teismo bylų analizę, trečiasias tyrimo uždavinius buvo įvykdytas.

**Ketvirtoje tyrimo dalyje** buvo apibendrinti tyrimo rezultatai, leidžiantys identifikuoti mokėjimų kriptovaliuta teisėtumą ir pateiktos rekomendacijos. Šioje diskusinėje tyrimo dalyje buvo palyginta Lietuvos Respublikos Konstitucinio teismo suformuota doktrina dėl centralizuoto pinigų leidimo požymio, kriptovaliutos fenomeno kontekste. Konstatuota, kad centralizuoto pinigų leidimo požymio tikslas netenka prasmės, jeigu kriptovaliuta gali veikti pilna apimtimi ir yra įstatymu pripažinta. To priežastis yra būtinybė dėl reikalavimo prieš pinigų klastojimą, piktnaudžiavimą ar sukčiavimo grėsmės išnykimas.

Atitinkamai dėl kriptovaliutos technologijos išnykusi rizika minėta apimtimi, lemia centralizuoto pinigų leidimo požymio nereikalingumą. Atsižvelgiant į aukščiau minėtus Lietuvos Respublikos Konstitucinio teismo išaiškinimus ir formuojamas vertynes, susijusias su ūkinės veiklos laisvės principu, darytina galutinė tyrimo išvada, jog Lietuvos Respublikos civilinio kodekso norma, nustatanti centralizuoto pinigų leidimo, kaip esminio pinigų požymį, dėl nepagrįsto ir neproporcingo ribojimų sudaryto požymio įstatymu pripažintas, galų gale neatsitinka Lietuvos Respublikos Konstitucijos. Taigi, Lietuvos Respublikos civilinio kodekso 1.100 straipsnio norma yra pripažinta kaip pažeidžianti Lietuvos Respublikos Konstituciją ir turėtų būti keičiama.
INTRODUCTION

Legal problem and relevance of the work. From the beginning of CC till nowadays there is still no legal regulation for legal definition and status of CC. Despite the fact that authorities in European Union recognize CC as digital money, the CC is not considered as money under the Civil code of the Republic of Lithuania. Thus, the CC which de facto acts as money is totally uncontrolled. Due to the discrepancy with the legal definition of money, CC artificially treated as commodity. Such a legal regulation violates the constitutional principle of economic activity and initiative, because payment by CC is considered not as payment, but as exchange and the payment made by using CC by itself could be considered illegal as monetary payment. Therefore, it is essential to determine whether payment made by CC is legal.

Novelty of the work. The CC is brand new and totally unregulated phenomenon in the law, which demands for the whole new evaluation. This topic is not analyzed yet by the legislators, courts or legal framework. In addition, CC is not similar with the traditional types of money and payment methods by its technology. So the legal rules cannot be applied by the analogy. Also, the unanimous position of the legal definition and the status of CC has not formed up by the legal scientists. What is more, the similar Master’s thesis has not been written and analyzed before. Therefore, the test of Master’s thesis novelty is undoubtedly approved.

Purpose of the work - by disclosing the relationship between the norm of the Civil code with the Constitution and by examining the comparison of the given results of the research in the context of CC, determine the legality of payments, made by using CC in the Republic of Lithuania. To reach the purpose of the work, these are the tasks to be carried out:
1. To review the evolution of the payment market, the legal definition of money and the requirements for payment transactions;
2. To reveal the technical parameters, the prevalence and legal opinion of the European authorities in the context of CC;
3. To perform a research on analyzing of the Civil code compliance to the Constitution;
4. By comparing given the results of the research in the context of CC, determine final conclusion of the legality of the payments made by CC and make recommendations.

Methodology. The work will be done by using several methods. The first and the second parts of the work will be done with systematic, descriptive and analysis methods. Taking into account that it is necessary to compare the norm of the Civil code with the Constitution of the Republic of Lithuania the comparative method could be chosen. In the other hand, The Constitution of the Republic of Lithuania is not very detailed by itself. Because of that, the research should be focused
to doctrine of CCLR. Precisely CCLR have the power to decide whether the laws and other legal acts are in a conflict with the Constitution of the Republic of Lithuania. Notably, the single case study methodology could be used with CJEU case. However, the purpose of the methodology is to examine the norm of the Civil code compliance to the Constitution. So, the III part of the research is based on narrative case study methodology, by analyzing CCLR doctrine. Analogy, logical, expert survey and other methods would not be or be less suitable and effective as the chosen one.

**Hypothesis of the work.** The centralized money issuance feature given by the norm of the Civil code leads to the breach of the Constitutional principle of economic activity, which under the law artificially makes payments to be recognized not as monetary payments, but as exchange and by this, the monetary payments by using CC will be considered as illegal. Therefore, the hypothesis of the work is to prove or deny whether the centralized money issuance feature violates the constitution principle of economic activity and initiative given by the Republic of Lithuania and respectively the monetary payments by using CC reasonably considered illegal as monetary payments.

**Structure of the work.** The legal definition of money, the requirements for payment transactions and the evolution of the payment market will be reviewed in Part I. The technical parameters, the prevalence and legal position of the European authorities in the context of the CC will be revealed in Part II. The compliance analysis of the Civil code to the Constitution of the Republic of Lithuania will be performed in Part III. The comparison of the given results of the research in the context of CC and final conclusion, as well as recommendations will be provided in Part IV of the work.
I. THE EVOLUTION OF PAYMENT MARKET, THE CONCEPT OF MONEY AND THE REQUIREMENTS FOR MONEY TRANSFERS

The first part of the master’s thesis, which consists of three sections, examines questions related to traditional money. The first section provides an overview of the evolution of the payment market. The second section provides an overview of the legal definition of money. This allows to determine what features is important for considering specific measure as money. After this determination, the analyze of the requirements for money and payment transactions is made in the third section. By performing these analysis and reviews the first task of the work is being achieved.

I.1. The evolution of payment market

People were looking for the most suitable and comfortable method of the payment. By changing the historical periods, many different ways of payment were changed in every historical period. Payment methods were changed along with money market evolution. The changes of money and payment methods is inseparable related to society, the way of people thinking and technologies, they using. In order to properly understand the essence and origin of the money and payment methods, which civilization is using now, it is necessary to look at the history of money and used payment methods. Thus, section will review the evolution of payment market.

I.1.1. Bartering and Commodity Money

Before any kind of money existed, people started to use the simplest way getting what they need – trade (bartering). People started to exchange their surplus for the needed goods. Barter is the exchange of a goods or services for other goods or services. Credits and debits were tracked in mental ledger. The problem of this way of payment is called double coincidence of wants\(^1\). “The first difficulty in barter is to find two persons whose disposable possessions mutually suit each other's wants”\(^2\). These payments were complex, slow and with limited possibility to direct exchange.

In order to solve this problem, society started to use commodity money - a basic item used by majority of people. “Commodity money <...> is money that derives its value from a commodity of which it is made”\(^3\). So the value of commodity money comes from the value of material of which

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2 Ibid.
it is made. The common examples of commodity money is fish, gold, silver, corn or shells. The biggest problem of this type of money is acting on by the vast price fluctuation. The more stable system was needed.

I.1.2. Coins as metal money

After economically slow and unstable type of money and payment method by using commodity money, people started to use “hard” money - coins. Additionally, “[i]t is clear that the metals far surpass all other substances in suitability for the purpose of circulation”

Coin were the first medium of exchange over huge regions, which became the base for the market economy. 

Countries were soon minting their own series of coins with specific values. By this, coins were centralized by each territory authority, but the systems works till the people trusted in authority, who issued it. Moreover, the authority controlled the supply of currency. Later on, in order to avoid counterfeiting or fraud, the coins has been started to be minted with some specific stamp or design. The problem was related to the lack of trust in the issued coins in the one region authorities with other region authorities issued coins. To avoid risks and difficulties by handling hard money, the brand new solution was needed.

I.1.3. Fiat money

Over time people recognize, that one person debt has a value, which can be transferred to other person. Thus, the new form of money (representative) has been created as paper currency that can be exchanged for a fixed amount of a valuable commodity, usually gold. The example of this type of money were the gold standard, by which money were based on gold on the promise of the government. It should be mentioned, that in order to solve problems related to the 1929 Great Depression, US president Franklin D. Roosevelt confiscate all gold from US citizens. This was the end of the gold standard and of the era of the representative money. Countries moved to fiat money systems which is used nowadays. Despite the fact, that the modern part of the world economies is using fiat money for a long time in some weak economy parts of the world, people partly using barter.

In any case, fiat money has no intrinsic value, neither can be redeemed for commodity. Its value originates from government decree, or fiat. The best example of fiat money is paper currency. The paper itself has almost no intrinsic value. With the assurance and strictly legal framework of the

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6 Ibid.
fiat money production, fiat money can serve as money. Governments maintain production control by using specific printing methods and materials, which are difficult to reproduce. So the value of currency is backed only by the legal decree and the confidence that others individuals will value it. In other words, fiat money value is based on trust, related to guarantee that others will accept it as payment for goods and services and that its value will remain stable. Fiat money has no value if the society which it circulates has no trust on it. Because fiat money is not linked to physical reserves, it risks becoming worthless due to the hyperinflation. If people lose faith in a nation's paper currency, like the U.S. dollar bill, the money will no longer hold any value.

The fiat money is not secured from the bubbles or other economic crisis. The reason for this is that fiat money has its unlimited supply. In addition, there is no independent and uninterested subject, which could control the governments or central banks fiat money emission. What is more, fiat money is not backed by any commodity or anything else. From the critics point of view, the fiat money is fundamentally useless. Fiat money has the value because governments decreed that it has fixed value and people trust governments.

I.1.4. Electronic money

It is known that the fiat money or coins are expensive to create, store, and transport. There are also security risks and costs. Thus, along with other society innovation in the late of 20th century modern civilization started to use electronic money. Electronic money is the same as fiat money, but in the electronic form. In addition, the different legal framework is applied. Economists state, that: “electronic money is a deposit of funds that is accessed electronically through a computer, a card or other device to pay for goods and services or debt.” Under European law, electronic money: “means electronically, including magnetically, stored monetary value as represented by a claim on the issuer which is issued on receipt of funds for the purpose of making payment transactions <…>, and which is accepted by a natural or legal person other than the electronic money issuer” European central bank electronic money describe as “an electronic store of monetary value on a technical device that may be widely used for making payments to entities other than the e-money issuer. The device acts as a prepaid bearer instrument which does not necessarily involve bank accounts in transactions.”

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10 Thomas Bishop, Money, Money, Banking and Monetary Policy (Lulu.com, 2012), 25.
12 William C. Spaulding, supra note.
13 Thomas Bishop, supra note, 27-29.
The key feature of electronic money is the issuer is being known. This subject is controlled by legal regulation and is liable for issuance.

It is important to mention, that electronic money can normally exist if a strong and stable financial institutions and financial system is provided. The reason of this is the same as in fiat money. In order to ensure trust and confidence, the creation (production) process ought to be tightly controlled[^16]. Electronic money is regulated strictly. Electronic money has many advantages, include, but are not limited to security, speed, low price and convenient way of payment. One of the way of electronic money is mobile payment. “The development of mobile payment platforms, such as Apple Pay and Google Wallet, and apps such as PayPal, [“Alipay”] and Venmo are now paving the way for the cashless future”[^17]. In any case, electronic money and transaction via electronic money is particularly regulated transactions.

1.1.5. Cryptocurrencies

It should be noticed, that the CC forerunner existed a long time ago. People of Yap islands (today – Micronesia)[^18] used large stone dicks called “Rai stones” as a means of payment[^19]. In term of cryptography, the first of it is known in Egypt, where the hieroglyphic inscriptions on the tombs were made[^20]. Until 1976 symmetric key cryptography were used[^21]. After 1976 Whitfield Diffie and Martin Hellman created two keys: a public key and a private key[^22]. This means that, the asymmetric cryptography and Secure Hash Algorithms has been created, which is the base for cryptosystems[^23]. 1994 starts main stream adoption[^24]. Mathematically Trustworthy Protocols[^25] solved the double spending problem. By this solution, the Bockchain was born. The CC technical foundations is related to the invention of an algorithm that remains central to modern web-based encryption. In the 1990-2000 were many attempts to create the similar to Bitcoin systems, for example “DigiCash”, “b-money” or “E-gold”.

[^16]: William C. Spaulding, *op. cit*.,
[^17]: *Ibid*.
[^24]: Leon Gaban, *This is the early days of Cryptocurrency. We are still in the lunatic fringe, and it is time to dive in*, <https://medium.com/cryptocurrency-citizen/this-is-the-early-days-of-cryptocurrency-c17678cb4045> [see 2018-01-11].
In 2009, Satoshi Nakamoto (an unknown person or a group of persons) launched Bitcoin network. Bitcoin is widely regarded as the first modern and dominant CC – the first publicly used means of exchange to combine decentralized control, user anonymity and record-keeping through Blockchain. Bitcoin has been started without ICO. What is more, there is a limited number of 21 million Bitcoins, which is technically fixed and cannot be changed. Fixed amount of Bitcoin is a part of Bitcoin’s core. In another hand, Bitcoin could be forked. Because of that, the fixed number of 21 million stays fixed, but it could split into other CC like 1/8/2017 Bitcoin split to BitcoinCash (which could fork too). By 13/1/2018, 16,800,000 Bitcoin have been mined and there’s only 20 percent left for miners to mine. At the end of 2010, Nakamoto disappeared. After the Bitcoin advent, more and more CC has been launched. According to 01/5/2018 information, there is more than 1600 CC with 460,000,000,000 USD market capitalization. All CC has some differences. Further research will discuss only about Bitcoin as the resident of all CC (otherwise specifically will be stated otherwise).

It should be noticed, that Bitcoin comes as alternative solution for 2008-2009 financial crisis worldwide and lack of confidence in the banking system. Crypto money by passes not only the financial system, but also the governmental power related to the financial system. In a short period of time, Bitcoin and other CC became a serious economic reality. There is still no general understanding whether CC is money, digital asset, commodity, security, property, currency or something else. Because of no unanimous legal regulation, every jurisdiction has their own laws and different scope of regulation.

In this section, the evolution of money market has been reviewed. Needless to say that the concept of money and the payment methods were changing along with civilization changes. The basic idea of changes has always been to adapt to an innovation, which simplifies the current society and economic situation, and helps to solve the imperfections of the former models. So, this section of the first part of the work is important for analyzing the legal definition of money and other sections of the work in further analysis. Also, this section provides an overview and knowledge about essentials of different types of money, which in the later part of the work, will provide the basis for comparisons with CC.

30 Cryptocurrency Market Capitalizations, supra note, [2018-02-11].
I.2. Legal definition of money

The purpose of this work is not to analyze the earlier money and payment methods concepts. Therefore this section will discuss about concept of money and payment method, which is being used nowadays. It is important to determine, what exactly money is. Depending on that, the legal relationship of money may be different classification. For instance, the contract can be regarded as sale and purchase (if the object of the payment is considered as money) or exchange (if the object of the payment is considered as commodity or asset) contract.

There is dozens of concepts of money. Thomas Bishop states that: „Money first be something that is generally exchanged for goods and services and generally used for repayment for debt“ 31. Horace White thinks that: „Money can be understood as a commodity which is chosen as a medium of exchange, the choice being made certainty by common consent“32. What is more, Francis Amasa Walker declares, that money is “[a]ny economic quantity which a debtor can by law compel his creditor to take in discharge of a debt”33. Professor Jevons gives an opinion, that: „money is simply any commodity esteemed by all persons, any article of food, clothing, or ornament which any person will readily receive, and which, therefore, every person desires to have by him in greater or less quantity, in order that he may have the means of procuring necessaries of life at any time“34. It should be noted, that no one of the mentioned concepts of money does not set a mandatory centralised money issuance feature.

In the context of legal regulation by law, the concept of money is provided by Civil Code of Republic of Lithuania Art. 1.100. The Civil code states: “Money, as an object of civil rights, shall be bank-notes issued by the Bank of the Republic of Lithuania, coins and means in accounts, also bank-notes issued by other foreign states, Treasury notes, as well as coins and means in accounts, serving as lawful means of settlement”35. The legislator distinguishes centralized money issuance as the main or the one of the main) feature of definition of the money. The nature of the discussing Norm is not detailed in the Civil code. The Civil code itself does not reveal its purpose. What is more, in the Civil code it is unclear what interest does it serve. The Commentary of the Civil code does not answer to these questions too.

Legal doctrine explains, that: “monetary sovereignty is one of the attributes of a modern State under international law. The right to regulate the monetary system resides with the State; and the obligation of other States to recognize that monetary system can only apply where the relevant

31 Thomas Bishop, supra note, 19-20.
32 Horace White, Money and Banking, (Ginn & Company, 1896), 10.
34 Jevons, William Stanley, supra note 6.
money has been created under the legal authority of the first State. \(<…\) a legal definition of money must necessarily contain or reflect at least some of the elements of the functional approach \(<…\) ‘money’ must exist within some form of legal framework, because it reflects an exercise of sovereignty by the State in question\)”\textsuperscript{36}. Thus, the interest of the given feature of issuance of money to the centralized domestic bank is serving to the state. The power to issue and control the money is one of the most important feature of the state sovereignty. Because of that, the interest the Norm serves is to keep sovereignty to the Republic of Lithuania.

On the basis of the Lisbon Treaty the member states of the European Union, including the Republic of Lithuania have transferred the right to resolve issues relating to money to the European Union, whose currency is the euro. In the Treaty on the Functioning of the European Union is stated, that: “The Union shall have exclusive competence in the \(<…\) monetary policy for the Member States whose currency is the euro”\textsuperscript{37}. It also states, that: “ It [European Central Bank] alone may authorize the issue of the euro. It shall be independent in the exercise of its powers and in the management of its finances. Union institutions, bodies, offices and agencies and the governments of the Member States shall respect that independence”\textsuperscript{38}. This means, that not Bank of Lithuania, but European Central Bank has authority to issue money and control money supply, inflation and emission. The Bank of Lithuania cannot act against it. The aim of the Bank of Lithuania is to keep prices stable\textsuperscript{39}. Moreover, European Central Bank can issue as much money as they want to and Member States must respect it. Despite the fact that the Member States gave the right to control money and resolve monetary issues to the European Central Bank, it still remains uncertain whether somewhere is a requirement that the money is only what is released by the central bank. The Republic of Lithuania hand over their sovereignty to the ECB and now have no (or have limited) sovereignty by the state to issue the money. It follows that the interest, which the Norm serve, is not keeping the sovereignty to the Republic of Lithuania.

The legal doctrine distinguish, that the purpose of Norm feature (issuance by central bank) could be understood to serving to the anti-money counterfeite. If the right to issue the money belongs only to the state and the money would be only as mediums, issued by the state, there would automatically be eliminated all private money. By this, all other money, which is not issued by the state bank, would be considered as counterfeited money. The best known example of counterfeited money is “Liberty Dollar” in the United States. Bernard Von NotHaus was found guilty in US federal court for counterfeiting and fraud, because he had promoted to use “Liberty Dollar” – a private

\textsuperscript{37} Treaty, OJ 2016/C, 202/01.
\textsuperscript{38} *Ibid.*
currency (an alternative to USD), which used the expression “Trust in God”\(^{30}\). In any case, it should be noticed that the money issued by the state banks, should possess the characteristics for the issued money, by which their counterfeiting would be reduced. If the state ensure, that the money they issue is secure and protected from counterfeit, the purpose of centralized money issuance is become reasonable.

The concept of money can be understood by comprehension of its functions (functional approach). Geoffrey Growther as well as Jevons named that: „Money can be defined as anything which is generally acceptable as a means of exchange or as a means of settling debts and which acts, at the same time, as measure and store of value“\(^{41}\). The scientists, as well as European Central Bank, defines fundamental functions of money\(^3\) functions, which sets a concept of money: ; i) store of value (money can be saved and retrieved in the future); and ii) unit of account (money acts as a standard numerical unit for the measurement of value and costs of goods, services, assets and liabilities; (iii) medium of exchange (money is used as an intermediary in trade to avoid the inconveniences of a barter system)\(^{42}\). That functional approach defines 3 main functions of money, but it does not state any requirement for the centralized money issuance. It is important to note, that member of the executive board of the ECB names the same 3 functions of money, but centralized money issuance was not mentioned for something to be considered money. In view of this, it is reasonable to state that everything [every commodity, asset and so on], what comply with 3 functions of money mentioned before, will be considered as money.

In more detail terms of legal doctrine, scholars defines, that the function of store of value is described as “[i]f money is to act as a store of value, then that value must be identified in a manner which the law can recognize and support. This, again leads to the conclusion that money must, with the support of the law, be denominated or expressed by reference to an identified unit of account, which effectively preserves the nominal value of the medium of payment”\(^{43}\). So, the legal doctrine connects the function of store of value with the legal framework.

Evaluating the money function of being a unit of account, the legal doctrine notice, that: “Money could only discharge this function if the unit of account is uniform throughout the monetary area concerned”\(^{44}\). This mostly achieved by setting the legal regulation for specific the one medium, for example determining the legal tender. Moreover, “[t]he required uniformity can only be achieved with any degree of permanence if the unit of account is prescribed by law. The essential features of money as a medium of exchange and as a unit of account thus require the underpinning of the law, or

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\(^{41}\) Geoffrey Crowther, An Outline of Money, (Thomas Nelson & Sons LTD, 1940), 35.

\(^{42}\) European Central Bank, Virtual currency schemes – a further analysis (30 February 2015), 23.

\(^{43}\) Proctor, C., supra note, 11-12.

\(^{44}\) Ibid.
the State”\textsuperscript{45}. It follows, that the function of unit of account is inseparable linked to the legal regulation. If the legal regulation do not support the medium, which aiming to perform this function, the medium does not perform it or perform with limitations. So the performance of unit of account is fully addictive to the legal regulation.

It is important to mention, that legal doctrine the function of medium of exchange, that: “if a country’s system of trade and commerce is to be based on money as a means of exchange, then the law must buttress that position and allow for the assured discharge of monetary debts by payment in that medium. Thus, the law must require that creditors accept payment through that medium—in other words, the creditor must accept payment in legal tender”\textsuperscript{46}. This aim is reached by defining legal tender status: the creditor have the obligation to accept the payments in state defined money (i.e. euro) without limitations.

Moreover, the Civil code forms additionally names, that the money should serve as lawful means of settlement. In other words, the norm of the Civil code adds an additional feature – backing by the state by setting out a legal tender. Art. 6.36 Para. 1. of the civil code of the Republic of Lithuania notes that: “Monetary obligations (debts) must be expressed and paid in the currency which in accordance with the valid laws is lawful tender in the Republic of Lithuania”\textsuperscript{47}. What is more, Art. 6.36 para. 2. finds that: “Monetary obligations may be paid within the order established by laws by means of bank-notes (coins), cheques, bills of exchange, transfer of funds, credit cards or by any other lawful tenders”\textsuperscript{48}. In the terms of this, euro shall become a legal tender in the Republic of Lithuania\textsuperscript{49}. In addition to this, legal and natural persons shall accept the euro for payments and settlements without limitation\textsuperscript{50}. Therefore, the norm of the Civil code provides a feature for money to be the legal tender in the state.

On the other hand, there are theories, which notes, that there is no necessary to be legal tender. The Supreme Court of Canada explained the definition of money in much broader area: “\textlangle…\textrangle describing money as ‘any medium which, by practice, fulfils the function of money which everyone will accept in payment of a debt is money in the ordinary sense of the words, even though it may not be legal tender”\textsuperscript{51}. Thus, on the Canadian Supreme Court opinion, the money could exist without any support of legal regulation, if the money acts along with functions of money and that money is generally accepted by everyone.

\textsuperscript{45} Proctor, C., supra note, supra note.
\textsuperscript{46} Ibid.
\textsuperscript{47} The Law of the Bank of Lithuania, supra note, Article 6.36 paragraph. 1.
\textsuperscript{48} Ibid., Article 6.36 paragraph 2.
\textsuperscript{49} Republic of Lithuania Law on the euro adoption in the Republic of Lithuania (2014-04-17, No. XII-828), Art. 3, para. 1.
\textsuperscript{50} Ibid, Article 3, paragraph 3.
\textsuperscript{51} Proctor, C. op. cit., 12.
Notably, all three functions must be in use in order to use money fully performing in legal sense. It is necessary to conclude that a definition of ‘money’ in law must recognize both the functions of money and the legal framework within which it must be created. This means, that legal framework or feature of backing by the law is important for defining the legal status of money. The feature of backing by the state may occur in a several different forms, but mostly it occur as determination of the legal tender for a specific measure. Therefore, the additional feature of legal tender, provided by the norm of the Civil code, is reasonable feature of money. For the sake of clarity and accuracy, the detialization of the features of money is presented below in Table No. 1:

<table>
<thead>
<tr>
<th>No.</th>
<th>Feature</th>
<th>Nature</th>
<th>Preliminary compliance to the Constitution</th>
<th>Ability to perform for the CC</th>
<th>Factual performance for the CC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Store of value</td>
<td>Economic and legal doctrine</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>2</td>
<td>Unit of account</td>
<td>Economic and legal doctrine</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>3</td>
<td>Medium of exchange</td>
<td>Economic and legal doctrine</td>
<td>+</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>4</td>
<td>Backing by the law</td>
<td>Civil code and legal doctrine</td>
<td>+</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>5</td>
<td>Centralized money issuance</td>
<td>Civil code</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Table No. 1. “Detialization of the features of money”

It is fair to conclude, that the money must satisfy 3 functions (medium of exchange, store of value and unit of account) and the feature of the backing by the law. The feature, of centralised money issuance is established in the Civil Code as the main (or one of the main) feature of money. This feature is serving to the purpose of keeping the state sovereignty to the state, to securing national currency stabile and fully used in the state and protecting national currency from the counterfeit. If there would be such a medium, which was not issued by private person, and would be resisted from the counterfeit, the Civil code would be considered as not need and without its essence. Despite the minority of the theories, money must have the support from the legal framework. The support could come out as determination of the legal tender. In any case, in order to perform 3 fundamental functions, money must have formal and mandatory backing by the legal system, which it circulates. It is thus concluded that for every measure, which aim to be recognized as money, must meets 3 functions of money and must represent an exercise of legal framework and sovereignty by the state concerned.

I.3. The requirements of payment transactions

52 Proctor, C., supra note, supra note, 15.
By revealing the legal definition of money, the further step is to reveal the requirement for payment transactions. Requirements for payment transactions has some differences in each country, depending on jurisdiction. Regarding this, as well as the fact that the legal regulation of the European Union is best known for the author of the work, therefore this section will deal with the requirements of payment transactions limited only by laws of the European Union.

Directive\textsuperscript{53} provides a lot of requirements for payment service users, payment service providers and for the payment transactions. Art. 45 para. 1 of the discussed directive states that member states shall ensure that certain information and conditions must be provided, including: (i) a specification of the information or unique identifier to be provided by the payment service user; (ii) the maximum execution time to be provided; (iii) all charges payable by the payment service user to the payment service provider and a breakdown of those charges; (iv) the actual or reference exchange rate to be applied to the payment transaction. Discussed directive also points out, that the name, address and other identification information of the payment service provider, description of the main characteristics of the payment service should be provided. On the basis of other legal acts, the other requirements related to the authorization and implementation of the payment transactions, also the requirements of capital maintenance and performance requirements of the payment service provider. The mechanism to become authorized payment institution are sufficiently regulated and complicated. Also, discussed directive prohibits natural or legal persons that are neither payment service providers from providing payment services. In other words, only the special subjects has a right to provide payment services. Any other person who provides payment services, which has not fulfilled all the requirements by Directive, are considered to be illegally operating.

It should be pointed out, that financial institutions should be required to verify the identity of the customer and beneficial owner before or by conducting transactions for occasional customers\textsuperscript{54}. In other words, the parties of the transaction should be identified. Identification should be performed by verifying the identity on the basis of documents, data or information obtained from a reliable and independent source. In cases of higher risk, the directive sets out the requirement to examine the background and purpose of all complex and unusually large transactions, and all unusual patterns of transactions, which have no apparent economic or lawful purpose\textsuperscript{55}. What is more, obliged entities shall increase the degree and nature of monitoring of the business relationship, in order to determine whether those transactions or activities appear suspicious\textsuperscript{56}. It is important to note, that the complex of requirement for payment transaction is fully applied to CC, if the CC would be recognized as money.

\textsuperscript{55} Ibid.
\textsuperscript{56} Ibid.
In conclusion, it may be said that payment transaction has many requirements for the parties of the transaction and payment service provider. Nevertheless, the key requirement for the payment transactions is to provide enough information about the transaction and clearly identify parties. Therefore, for such reasons as anti-money laundering doctrine, the identification of parties of the transaction, is considered to be mandatory. Anonymous transaction is not allowed.

By revealing the legal definition of money, the requirements for their transactions and review the evolution of the payment market, the first task of the research has been completed. By this part of the research the important findings were obtained. First section of this part of the work provided the overview about history of the money, different types of money and the reasons for the evolution of payment market. The second section provided the overview about legal definition of money, information about the norm of the Civil code, the interest it serves and the features and functions of the money. The third section provided the overview about requirement and essentials for monetary transactions. It is further expedient to continue the research by revealing the prevalence and usage of CC, legal regulation and peculiarities of the money transfers by using CC. The further research will be in continued in Part II of the work.

II. THE TECHNICAL PARAMETERS, THE PREVALENCE AND THE LEGAL POSITION OF THE EUROPEAN AUTHORITIES IN THE CONTEXT OF CC

The second part of the master’s thesis, which consists of two sections, examine questions related to CC. The first section provides the revelation of the technical parameters of the CC, including peculiarities of transactions technology performance. In addition, in this section the prevalence and usage of the CC is shortly revealed. The second section provides the revelation of the legal position to the CC of the European Union authorities. From the second section the leading opinion of the status of the CC will be revealed. By performing these analyzes and disclosures the second task of the work is being achieved.

II.1. The technical parameters and prevalence of the CC

From the historical review of payment market evolution, it is obvious that CC does not confirm exactly to any type of money and payment method, which has been used before. Technical
parameters is totally different and innovative in contrast to previous civilization payment methods. Hence, this section will reveal the technical parameters of the cc, the peculiarities of the performance and the prevalence of the CC.

Before moving on, it is important to understand, that CC could be divided into two categories: Coins (including Bitcoin) and Tokens (including TRON\textsuperscript{57}). In most cases tokens comes from startups by ICO. In addition, ICO is similar to an Initial Public Offering (IPO), which is the tool for investors to purchase shares of a legal entity. The difference is that ICO is mostly used as fundraising mechanism for the new business projects\textsuperscript{58}. Tokens could be recognized not as money or currency, but more like asset or commodity and act as crypto projects or crypto assets. Coins is acting more like money or currency. The Coins itself does not aiming at fundraising or profit making. What is more, all the Coins and Tokens is regarded as CC, nevertheless the most of the Tokens do not function as a currency or medium of exchange. Since the subject of this work is not to analyze concept of Tokens or differences between those two categories, therefore further analysis will be focused only in CC as Coins and will be focused on Bitcoin.

CC is working on open sourced protocols. It means that every person can participate inn, without asking permission, showing ID or registering in registry. The technology which the network is using is called Blockchain. The Blockchain is described as: “as a system that allows a group of connected computers to maintain a single updated and secure ledger”\textsuperscript{59}. Furthermore, the Blockchain is distributed database of records, or public ledger and any type of digital events that have been executed and shared among participating parties\textsuperscript{60}. The transaction is verified by consensus of a majority of network users by adding the new block on the chain, which contains the confirmed data. Consensus consist of voting process of the network users by which, the new block is accepted or rejected, by voting with their computers CPU power\textsuperscript{61}. Moreover, once the data entered in the Blockchain, it cannot be erased. Theoretically, the data could be changed in the formatted block, but the majority of network users must agree on this change, which is difficult to implement.

Distributed ledger technology means that there are any centralized subject, which has the power to control the network or technology. The peers connected one by another. The centralized network is controlled by dominant central subject (for example central bank) from one centralized point. Decentralized network performs from the few central points, but on the same network with

\textsuperscript{57} TwentySumCrypto, TRON—(TRX) coin cryptocurrency. LITERALLY everything you need to know, all in 1,article., <https://medium.com/@TwentySumCrypto/tron-trx-coin-cryptocurrency-literally-everything-you-need-to-know-all-in-1-article-cea0387929a3> [2018-04-07].


\textsuperscript{60} Michael Crosby et al, BlockChain Technology, (Sutardja Center for Entrepreneurship & Technology Technical Report October 16, 2015), 1-3.

\textsuperscript{61} Satoshi Nakamoto, supra note.
hierarchal control (from example private banks system). The legislature has the power to control both, centralized and decentralized networks. The reason for this is the simple – the possibility to control the subject (which is directly affecting and controlling the network) is equal to the possibility to control the network. It means, that the central dominant subject could be affected by legislature requirement to perform some actions or by the cyber-attacks. In contrast, the distributed network operates differently. In this network there are dozens subjects, but no one of them acts as central one. Thus, the legislature do not have the possibility to affect central subject or the whole network by its core. In addition, the legislature still has the power to control distributed network users, but only controlling externally one by one by applying legal rules for the system or its users. However, the direct control of the technology is totally unavailable for the legislature.

In view of identification of the transaction parties, need to be pointed out, that the network is working between unknown persons. It means, that there is no information about the network user’s identity. The network users could only be identified by the public key, which is the set of specific numbers and symbols. There is two keys: public key, which acts like number of a bank account and private key, which acts like a password or confirmation code. Therefore, public keys of the network users is not registered or identified in any other way by linking public keys to the specific individuals. Therefore, the users of the system has remained anonymous. Therefore, the payment transaction by using CC does not match with the requirement of Anti-money laundering, by which the parties of the transactions, must be clearly identified.

In the context of payment transaction, it is necessary to mention, that transactions in the network is being made through wallets. It basically is a software program where Bitcoins are stored. Through the wallets the transaction is being made. Thus, the wallets performs as the same principle as bank accounts. If a person has internet access, he is able to create wallet and locate it in the: (i) website; (ii) in the app (for the phones) or software program (for the computers); (iii) hardware. The transaction is made in a several minutes. It should be noted, that transaction must be confirmed (by miners). The miners (persons, who confirm transactions by using their CPU power), get benefits from this activity. Within a CC network, only miners can confirm transactions by solving a cryptographic algorithms. Afterwards, every node of the network adds it to its database. Once the transaction is confirmed a miners receives a reward, plus the transaction fees. What is more, the community considering transactions confirmed, when they are included with high probability. In any case, the network is fully secured, fast and cheap.

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In the terms of trust, Bitcoin whitepaper states: “[w]e define an electronic coin as a chain of digital signatures.” The network is fully secured by checking ledger transactions history for the specific Bitcoin. Needless to say, that system is fully trusted, without any trust. “Bitcoin is a self-regulating value transfer network powered by collective trust in the currency.” As mention Bitcoin whitepaper, the loss of trust in any currency in would render it worthless. There is no need to trust in any person, bank or government: “while we previously had to trust financial institutions to verify transactions, with the Blockchain we have to trust the technology itself.” So, the transaction on the network is being made without relying on trust and could not be affected by counterfeit or any kind of opportunism.

It need be pointed that, current prevalence of the CC is around the globe. The CC could be purchased from the exchanges like “BitFinex,” “Kraken” or “BitStamp” from any area in the world. There are other ways to get Bitcoin: mining, or purchasing from face-to-face with a seller or use a Bitcoin ATM. There are more than 2600 Bitcoin ATM’s around in 65 countries. There are more then 40 000 other service providers. Bitcoin could be used to buy almost anything: food (Subway), travel (airBaltic), online shopping (Microsoft, Shopify) and etc.

In the conclusions from this section is important to mention, that CC is performing on the brand new technology, which is provides a new solutions for the payment transactions. The transaction could be anonymously made in fully secured and trusted distributed network, where decisions are made by the consensus of the majority of the network users, by voting with their computer power. The prevalence of the CC is around the globe. So CC is on the way to become the serious economic reality in the market, which could be used without any limitation of territoriality around the world.

II.2. The legal position of the European authorities in the context of CC

By the revelation of the technical parameters and the prevalence in the context of the CC, there further analysis by revealing the legal opinion of the authorities in the European Union, could be made. The status of the CC is different and exclusively depends on the jurisdiction. For instance, in the United States the CC is considered as commodity: “[CC] purport to be items of inherent value

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63 Satoshi Nakamoto, supra note.
64 Ibid.
virtual currencies have been determined to be commodities\textsuperscript{71}. Even in European Union there is no general regulation. Each member state has the power to regulate CC as they want. For example, Germany recognizes CC as legal tender, equate it to traditional fiat currencies and freeing it from taxation\textsuperscript{72}.  

From the beginning (2012) till nowadays ECB and EBA hold united and consistent position in the point of view of concept of CC. At 2012 ECB states, that: “A virtual currency can be defined as a type of unregulated, digital money, which is issued and usually controlled by its developers, and used and accepted among the members of a specific virtual community”\textsuperscript{73}. Although this definition will be changed later, it was the first time that CC was named as digital money.

At 2013 EBA declares, that: “A virtual currency is a form of unregulated digital money that is not issued or guaranteed by a central bank and that can act as means of payment”\textsuperscript{74}. This formed the basis for other explanations in the future.

EBA 2014 states, that: “[CC] are defined as a digital representation of value that is neither issued by a central bank or public authority nor necessarily attached to a FC [fiat currencies], but is used by natural or legal persons as a means of exchange and can be transferred, stored or traded electronically. [CC] can therefore be characterized along the distinguishing features specified below. Although some of the features resemble activities or products that are already within the remit of the EU E-Money Directive, these products are not intended to be included here, as e-money is a digital representation of FC, which VCs are not”\textsuperscript{75}. By this, EBA properly confirms that electronic money is digital representation of fiat money, which does not similar to the CC. Thus, this explanation from the EBA is considered to be one of the most accurate of any time.

ECB, 2015 denotes, that: “<\ldots> the ECB does not regard virtual currencies, such as Bitcoin, as full forms of money as defined in economic literature. Virtual currency is also not money or currency from a legal perspective. <\ldots> [CC] is defined as a digital representation of value, not issued by a central bank, credit institution or e-money institution, which in some circumstances can be used

as an alternative to money”76. ECB conclude, that CC cannot be regarded as full forms of money, because of the low level of acceptance and the high volatility of their exchange rates and thus purchasing power make them unsuitable as a unit of account77.

FATF, 06/2015, states on annual report, that: “Virtual currency is a digital representation of value that can be digitally traded and functions as (1) a medium of exchange; and/or (2) a unit of account; and/or (3) a store of value, but does not have legal tender status (i.e., when tendered to a creditor, is a valid and legal offer of payment) in any jurisdiction”. FATF confirmed possible usage CC as full form as money and that usage is not contradicted to the functions of money as they were described by ECB. Moreover, FAFT constitute, that “Its definition now appears too limited, since math-based, decentralized virtual currencies like Bitcoin are not issued and controlled by a central developer, and some jurisdictions (e.g., the United States, Sweden, and Thailand) now regulate virtual currencies”78. Although it's only a matter of a few years since a certain ECB definition was offered, but his ECB definition does not match the current situation. Notably, as the FATF correctly pointed out, that the CC is not controlled by any person or jurisdiction and the authorities technically does not have the power to control it. The only thing they can do, is to fix regulation, but the core is inaccessible by its technology.

FAFT notes, that: “[CC] is not issued nor guaranteed by any jurisdiction, and fulfills the above functions only by agreement within the community of users of the virtual currency. Virtual currency is distinguished from fiat currency <…> which is the coin and paper money of a country that is designated as its legal tender; circulates; and is customarily used and accepted as a medium of exchange in the issuing country”79. Thus, FAFT defined CC as specific form of money, which is fully match with money functions and highlights the fact that CC cannot be recognized as other forms of money (fiat, e-money etc.).

It should be noticed, that ECB, 2016 declares, that: “virtual currencies’ do not qualify as currencies from a Union perspective”80. As ECB says, the term “currency” is understudied as: “notes and coins, the circulation of which is legally authorized, including euro notes and coins, the circulation of which is legally authorized pursuant to Regulation (EC) No 974/98”81. So the reason why CC is not considered as currency is that CC is not issued by central subject (a.k.a. European Union). What is more, ECB recommends: “defining virtual currencies more specifically, in a manner that explicitly clarifies that virtual currencies are not legal currencies or money”. It another words, ECB in the newest official position named CC not as currency or even money and follow by the

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76 European Central Bank, Virtual currency schemes – a further analysis (30 February 2015).
77 Ibid., 24.
79 Ibid.
80 European Central Bank, OPINION, CON/2016/49.
In addition, ECB states that CC “do not necessarily have to be exchanged into legally established currencies <…> for purchase goods and services” 82. Moreover, as ECB denotes, CC is an alternative mean of payment.

In the context of opinion of the authorities in the Republic of Lithuania, it should be noted, that State Tax Inspectorate under the Ministry of Finance of the Republic of Lithuania 83 and The Bank of Lithuania 84 declares almost the same position as EBA 2013.

It is important to note, that CJEU 2015, notes that: “virtual currency can be defined as a type of unregulated, digital money, which is issued and controlled by its developers and accepted by members of a specific virtual community” 85. So CJEU recognizes CC status as digital money. CJEU also collates the CC with fiat currency. Furthermore, CJEU denotes that Bitcoin is a direct means of payment between the operators that accept it 86. Bitcoin is a pure means of payment, so for the purposes of the taxation of value added tax, CC and fiat currency must be treated in the same way as legal tender by the opinion of the CJEU 87. Therefore, the CJEU consider CC as the same legal status as the fiat currency. It should be marked, that CC is considered not as asset, commodity, security, but as money or currency under the case of the CJEU.

To sum up this section of the work, it should be noticed that the legal regulation of CC is very different and depends on each jurisdiction. European Union authorities has no unanimous opinion, but the leading position is that CC specific type of money – digital money. Nevertheless, CC is not regulated by the legal framework under the European Union. It follows that while CC is defined as digital money by the position of the authorities, but there are no laws, by which CC could be recognized as a lawful type of money and payment method.

By relaving review the technical parameters of the CC, comes to light that the CC is the whole new technology from the technological point of view, which offers the form of money and payment method in the new way. By this, the payments could be made inter alia anonymously without any limitations of territoriality. Such innovations have created a basis for unequal legal regulation by the authorities in the European Union. Consequently, by comparing the legal definition of the money from the Part I of this research with the opinion of the European Union authorities, there is a clear difference and discrepancy. Therefore, the further expedient to continue the research in the

82 European Central Bank, OPINION, CON/2016/49.
83 STI Explanation on virtual currencies, 2018-01-18.
methodological part of the work by analyzing the norm of the Civil code compliance to the Constitution.

III. ANALYSIS OF THE ARTICLE 1.100 OF CIVIL CODE OF THE REPUBLIC OF LITHUANIA COMPLIANCE TO THE CONSTITUTION OF THE REPUBLIC OF LITHUANIA

In order to determine the legality of payment made by using CC, it is important to create a research methodology, which allow to compare the Civil code compliance to the Constitution. Since the CCLR have the power to decide whether the laws are in conflict with the Constitution. Therefore, the methodological choice has been made by choosing the CCLR study case analyze as a main methodology of this work. Need to be pointed out, that in the European Union has no unanimous or leading position, which would be established by law, regarding to the legal status of CC in context of money. Each Member State has the power to create different legal regulation. Due to that reason, it is not expedient to do research in wide territoriality and in several different jurisdictions. Thus, the research will be limited only to the jurisdiction of the Republic of Lithuania, by analyzing the norm of Civil code of the Republic of Lithuania compliance with the CCLR.

As it was mentioned before, CC is not recognized as money under the norm of the Civil Code of the Republic of Lithuania. Civil Code highlights centralized money issuance feature as the main feature of money. Because CC is not issued by the centralized subject, including Central Bank of Lithuania, CC is not money under the law in the Republic of Lithuania. Consequently the payment, made by using CC is illegal as monetary payment. In addition, the parties of the agreement is obliged to use CC not as currency or money, but as commodity, or asset. Thus, the norm of the Civil code artificially recognize CC as commodity or asset. In respect to this, payments by using CC, becomes exchange of goods (barter). So it is important to answer the question whether Civil code is not contrary to the Constitutional freedom of individual economic activity and initiative principle.

The Constitution of the Republic of Lithuania inter alia states that: “The economy of Lithuania shall be based on the right of private ownership, freedom of individual economic activity, and economic initiative”88. The Constitutional principle is not detailed, so it is necessary to find out what freedom of individual economic activity and initiative is, and what restrictions is considered reasonable according to the CCLR.

88 The Constitution of the Republic of Lithuania Art. 46.
The CCLR denotes that: “The freedom of individual economic activity and initiative is the whole complex of legal opportunities which creates preconditions for an individual to independently adopt decisions necessary for his economic activity”\(^\text{89}\). Therefore, the principle freedom of individual economic activity and initiative covers the area of Civil code regulation, including the right to freely choose business, the right to freely conclude contracts, the freedom of fair competition. In addition, the norm of the Civil code undoubtedly related to the general welfare of the nation, monopolization, and the scope of freedom to buy, sell, provide services, produce or otherwise engage in any activity permitted by law for individuals.

Simultaneously the norm of Civil code compliance with the constitution could be based on general welfare of the Nation. CCLR clarified, that general welfare of the nation, means obligation of the state to strive for the balance of interests of various persons by regulation of economic activity\(^\text{90}\). Thus, the state must comply the principle of coordinating the interests of individuals and of the society.

In addition, CCLR explained, that: “‘The general welfare of the Nation’ cannot be opposed to the welfare, rights and legitimate interests of the economic entity the activity of which is regulated, as well as those of other persons who have established and are running the said economic entity or are otherwise related to the said entity”\(^\text{91}\). Given that, the limitations is considered as reasonable if they are in the purpose for protection of the rights of other persons and constitutional values. Moreover, the legislature must ensure, that the general welfare of the nation must serve for protection the environment from harmful influences, conservation the nature, usage its resources in a rational manner\(^\text{92}\), for fair competition and for the protection of consumer rights, the equality of rights of persons\(^\text{93}\). CCLR also names, that limitations could only be related to those areas, which cannot be controlled by separate individuals. Those areas should be considered as important for the whole nation and is characterised that when this activity is carried out, a direct influence is exerted on the entire national economy, health ar security\(^\text{94}\). The security and reliability of the these sensitive areas is a constitutionally important objective, which is a public interest justifying a particular differentiated legal regulation of economic activity in this sphere\(^\text{95}\). The sensitive sphereas includes the monetary system of the nation. What is more, the legislature is obliged to establish such legal regulation that would ensure the security, stability, and reliability of the energy system\(^\text{96}\). So, it is appropriate no

\(^{89}\) The Constitutional Court of the Republic of Lithuania (6/1/2011, Case No. 13/2008).


\(^{91}\) Ibid.

\(^{92}\) The Constitutional Court of the Republic of Lithuania (9/5/2014, Case No. 47/2011).

\(^{93}\) The Constitutional Court of the Republic of Lithuania (15/1/2015, Case No. 6/2012).


\(^{95}\) Ibid.

\(^{96}\) Ibid.
state, that the limitations is a positive occurrence, but it must meet the criteria mentioned above, specially for the sensitive areas of the nation.

In respect to this, individuals may exercise the freedom of economic activity freedom in accordance with certain requirements and limitations\textsuperscript{97}. The CCLR clarifies, that: “freedom of economic activity not only can but usually must be limited in accordance with the principle of proportionality, according to which, the freedom of economic activity cannot be restricted more than is necessary for the constitutionally significant health and environmental objectives\textsuperscript{98}. In any case, the limitations cannot deny the freedom of economic activity. It is pertinent to note that limitations must be grounded, proportional, adequate to the intended purpose and accurately formulated. Therefore, the legislative nor executive power may not opt out of this constitutional obligation\textsuperscript{99}. It is thus concluded that the limitations must be proportional to its purposes.

Under the terms of the monopolization, it is important to note, that the monopoly is understood as an exclusive right of specific individuals (or group of individuals) to operate in a certain field, by which unequal conditions has been made. So the monopoly could exist in any sphere of the society life (including private and public sector). In this connection, the CCLR states, that “the law shall prohibit monopolisation of production and the market” means that it is prohibited to introduce a monopoly, i.e. it is prohibited to grant, by law, an economic subject exceptional rights to operate in a certain sector of economy due to which this sector would become monopolised\textsuperscript{100}.

In any case, the prohibition to monopolise is reasonable for spheres such as the sale of goods, production or provision of services. The specificity is in a public sector, where the state provide monopolised services, including the taxation system or the system of cours, where the purpose of those services comes from constitution the monopoly is considered to be reasonable. This also includes the monetary system of the state. Civil code describes the issuance of traditional (fiat) money. It is reasonable to monopolise this area, because it directly protects rights of individual and the stability of the whole state monetary system. In addition, a fully trusted subject, which could issue the money without any possibility to in oportunism, is needed. It goes without saying that the best choise of it is the state. So it is reasonable to control and set out the specific requirement as centralised money issuance as the key feature for such a sensitive sphere as money issuance money.

It possible to draw meaningful conclusion from the norm of the Civil code compliance to the CCLR doctrine, that the freedom of individual economic activity and initiative is wide complex of legal opportunities for an persons to take lawful decisions. The norm of the Civil code is directly affecting the mentioned individual’s choice. Given that, the Civil code serves to monetary purposes,

\textsuperscript{97} The Constitutional Court of the Republic of Lithuania (5/3/2015, Case No. 44/2011).
\textsuperscript{98} The Constitutional Court of the Republic of Lithuania (30/5/2017, Case No. 8/2016).
\textsuperscript{99} The Constitutional Court of the Republic of Lithuania (2/4/2013, Case No. 2/2010).
\textsuperscript{100} The Constitutional Court of the Republic of Lithuania (29/4/2009, Case No. 23/05-18/07).
which is sensitive and important to the whole nation. The legislature has the obligation to determine such a legal rules, which ensures the stability and strict control of the money issuance and at the same time general welfare of the nation. The monopoly of the state in the sphere of money issuance, is considered to be reasonable. The applied legal rules must be proportional, and coordinate the interests of individuals and of the society. The norm of the Civil code is considered reasonable and it does not violates the constitutional principle of freedom of economic activity and initiative. Therefore, payments made by using CC is reasonably considered to be illegal as monetary payments.

IV. COMPARISION OF THE GIVEN RESULTS IN THE CONTEXT OF CC, FINAL CONCLUSIONS AND RECOMMENDATIONS

The fourth part of the master’s thesis, which consists of three sections is the final part of the study. The first section provides examination of the summed results of the research. The second section provides final conclusion from the resolved tasks of the work. The third section provides recommendations for the legislature and further researches.

IV.1. Comparison of the given results in the context of CC

By revealing the norm of the Civil code compliance to the constitutional economic activity and initiative principle methodological part of the research has been completed. This section of the IV part the work will compare the obtained results in the context to the CC.

As concluded in the analysis of the Civil code compliance to the Constitution, the feature of centralized money issuance set out by the norm of the Civil code serves for the general welfare of the nation. The methodological part of the research has shown that the norm of the Civil code performs the obligation of the state to ensure the general welfare of the nation means which serves in favor for the whole nation. Especially, general welfare of the nation is important for the sensitive spheres such as money issuance. In any case, legal rules must be proportional, and coordinate the interests of individuals and of the society. Therefore, the feature of centralized money issuance reasonably applies the limitations. In addition, the norm of the Civil code proportionately limits the freedom of economic activity and initiative under the CCLR doctrine and does not violate the Constitution of the Republic of Lithuania by itself. This conclusion came from the narrative analysis of the CCLR doctrine in the context of the norm of the Civil code.
It is important to compare mentioned result in the context of CC. It should be noted, that as opposed to the Civil Code, the absence of centralized money issuance and central subject is positive feature of CC, which could never be applied to traditional currency. So, fiat currencies will always be in the obligatory to be control by the law, in order to reduce money counterfeit and ensure stability of the money market. Therefore, the limitations, which comes from the purpose of ensuring the general welfare of the nation by applying feature of centralized money issuance will always be considered as reasonable and proportional, in there would no other alternatatives such as CC.

Accordingly, in the term of CC, the fixed limitations is considered disproportional and violated the constitutional freedom of economic activity and initiative. The reason of this statement is that CC is secured from the threats, including counterfeit or oportunism, which the stability of the measure. In other words, CC is secured by its core internally from any kind of threats. Because of this, there is no need to secure money issuance by applying specific legal requirements for example requirement for centralised money issuance.

As technical parameters has shown, the decisions in the CC network are taken by a majority of network users. The CC network, by the technology itself, is totally secured and could not be affected by oportunism or any person. By this, CC has no demand for the centralised money issuance system, which could protect system users (citizens) from the oportunism and ensure stable and reliable system performance. The technology itself is guarantee security from the threats. Therefore, CC is the first such a tool in the history of money, which has the possibility to solve the problem for centralized money issuance demand.

Notably, money (not by relating money to any to any type of money, including CC or fiat) by its nature is a measure which purpose has to be used to simplify the barter. Thus money is the tool for individuals to get what they need in simply and comfortable way. Whereas the history of civilization does not have the tool for fully secured payments, there always has been threat for opportunism. In order to control this risk and ensure more stability the intervention of the state were necessary. As mentioned in the previous part of the work, intervention by the state is a constitutional duty for a state.

Therefore, today there is no such a demand. As president of the United States declares: “Bank-paper must be suppressed, and the circulating medium must be restored to the nation to whom it belongs”101. In respect to this, the norm of the Civil code is considered to the outdated and violated constitutional freedom of economic activity and initiative. Accordingly, it should be noted, that payments using a CC must be considered legal.

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Given this in mind, by using CC, there would be no demand for the monopolized control of the money issuance by the state. Thus, the same logic applies to the monopoly, which belongs to the state under the norm of the Civil code.

With these considerations in mind, by the norm of the Civil code compliance to the Constitution it is fair to conclude, that despite the fact, that the norm of the Civil code is considered reasonable and the Constitution, in the context of using CC, the norm of the Civil code by distinguishing the feature of centralised money issuance is unreasonable and violates the Constitution of the Republic of Lithuania. Thus the norm of Civil code should be changed and less restrictive limitations, as well as the legal framework should be applied to CC.

IV.2. Final conclusions

In this master's thesis, by disclosing the compliance between the norm of the Civil code and Constitution, during the Constitutional Court case analysis, determine the legality of payments, made by using CC in the Republic of Lithuania, the fourth tasks has been resolved. The results of resolved tasks are summarized in the following conclusions:

By solving the first task in this master's thesis the legal definition of money, the requirements for payment transactions and the evolution of the payment market has been reviewed. This allows to summarize, that:

(1) The CC as the type of money and payment method is brand the phenomenon in the money market. The payment market today is consisted from a few types of money: fiat money, electronic money and the CC.

(2) Money should satisfy 3 fundamental functions, including medium of exchange, store of value and unit of account. Also, money must be supported by the law. The support usually comes out as determination of the legal tender for the measure (today – fiat money). The norm of the Civil code establishes the feature of centralised money issuance by the state. This feature by its essence is not related to the nature of money. Also, this feature considered to be fixed by the state for reducing risks of money counterfeit, fraud and opportunism. In addition, the feature is serving to the purpose of keeping the state sovereignty to the state and ensuring stable money market and safe money issuance. The reason why CC is not recognised as a money is because the CC is not issued by central subject (state) and for this CC does not match with the required feature of centralised money issuance under the norm of the Civil code.

(3) The most important and mandatory requirement for payment transaction is to determine enough information for identification of parties of the transaction. This requirement is
important for anti-money laundering doctrine. Anonymous transaction is not allowed. The parties of the transaction must be clearly identified.

By solving the **second task** in this master's thesis the technical parameters and the prevalence and legal position of the European authorities in the context of the CC has been revealed. This allows to summarize, that:

1. By using CC as a payment method, the payment transactions could be made anonymously in fully secured and trusted distributed network, where decisions are made by the consensus of the majority of the network users, by voting with their computer power (CPU hash power). CC is not issued by any central subject and it does not have centralized subject, which could be controlled by the legislator or could be affected by opportunism or any person. The prevalence of the CC is without any limitation of territoriality around the globe.

2. European Union authorities, including ECB, EBA, FAFT and CJEU have the leading position by considering CC as a digital money. Nevertheless, CC is not regulated by the legal framework under the European Union. It follows that while CC is defined as digital money by the position of the authorities, but there are no laws, by which CC could be recognized as a lawful type of money and payment method.

By solving the **third task** in this master's thesis the analysis of the Civil code compliance to the constitution has been performed. This allows to summarize, that:

1. The norm of the Civil code is directly affecting the individual’s freedom of economic activity and initiative to take lawful decisions.

2. The feature of centralisd money issuance, given by the Civil code is serving for the general welfare of the nation. The general welfare of the nation means the duty of the state to set up a balanced legal rules, which limits the freedom of economic activity and initiative. This freedom must be limited for a spheres, which is important for the general welfare of the nation. The special attention and limitation must be fixed for the sensitive spheres, including money issuance. The legal framework and limitations must be proportional, and coordinate the interests of individuals and of the society.

3. The norm of the Civil code is considered as reasonable and it does not violates the constitutional principle of the freedom of economic activity and initiative. Therefore, payments made by using CC is reasonably considered to be illegal as monetary payments.

4. The norm of the Civil code meets the definition of the monopoly, given by the CCLR. The monopoly of the state in the sphere of money issuance is treated as reasonable.

By solving the **fourth task** in this master's thesis the summed results of the research has been provided. This allows to summarize, that:
The feature of centralised money issuance was reasonable in the history of money for a long time ago. Nowadays the feature of centralized money issuance currently does not carry out its purpose. CC is secured by its core internally from any kind of threats, including fraud, money counterfeit or opportunism. Because of this, money issuance by CC has no demand from the legal rules to be secured. It follows that the norm of the Civil code in the terms of the CC is considered to be disproportional and limits the constitutional freedom of economic activity and initiative more than is necessary.

In addition, CC has no demand for the monopolized control of the money issuance by the state. Therefore, the norm of the Civil code, by which the centralised money issuance belongs to the state is considered to be unlawful.

In the context of the CC, the norm of the Civil code by distinguishing the feature of centralised money issuance is considered to the outdated, unreasonable and violates the Constitution of the Republic of Lithuania. Thus the norm of the Civil code should be changed and less restrictive limitations, as well as the proper legal framework should be applied to CC. In respect to this, payments by using CC ought to be treated as legal monetary payments.

The positive impact of the CC will be felt less in strong economy countries (including European Union), but the benefit of CC will potentially change vastly the weak economy countries.

In the end of this section as well as the end of the work, is fair to conclude that CC is the one biggest invention. The Bitcoin as the dominant CC seems to be a currency of a choise for the chosen measure to use as money, which has the potence restore the power to control and issue money to the persons by secured, trusted and distributed ledger technology. Since the state have the duty to limit the freedom of economic activity and initiative in accordance with the principle of proportionality, it is necessary to lay down rules, which would allow to use CC in full. In accordance with the applicable legal regulation, given by the norm of the Civil code, payments by using a CC considered illegal as monetary payments. Hence, by such requirements the norm of the Civil code should be changed. Legal regulation must act as a protective measure and a measure of public interest that is in the line with the functions of money. Legal regulation cannot become a formal and outdated barrier by which the society cannot use the measure that is acceptable for them. Therefore, the feature of centralised money issuance given by the norm of the Civil code is considered to be outdated, unreasonable and violates the freedom of economic activity and initiative provided by the Constitution of the Republic of Lithuania. Thus the norm of the Civil code should be changed and less restrictive limitations, as well as the proportional legal framework should be applied to the CC. The final conclusion could be drawned by stating that by the nature of money, the legal doctrine and the technical parameters of the
CC, as well as the position of the European authorities, payments by using a CC must be recognized legal as monetary payments.

**IV.3. Recommendations**

In light of the final conclusions of this work, the Further directions researches is basically limited to the scope of this work. Therefore, the following areas could be developed in the further researches: (i) the investigation of the requirements for the new legal definition of money, which would include the CC; (ii) to make an investigation on the ground of needed legal requirements for the consideration of the specific CC, by analysis the CC as coins and tokens as money or legal tender; (iii) to analyse, wheather the state has the right to determine the legal framework, by which the one and the only CC issuer (if feasible technically) or the exchanger is the state; (iv) to analyse the possibilities to create a national/international or even global registry of CC exchangers and wallets.

Since the CC is sucured and could not be controled from the internal part, the analysis of mandatory legal requirements for external part of the CC must be created, including: (a) requirements for the CC exchangers to implement specific management (among them requirement for disabled internet connection for the computers, where data of the transaction or wallets stored, statutory capital, requirements for password and other organizational and technical measures); (b) requirements for exchangers of verification the identity of parties during the large payment trasnactions; (c) requirements for exchangers to monitore the wallet account balance of the large for the strong changes in balance.
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