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LEGAL STATE OF BITCOIN : REGULATORY CHALLENGES
master thesis

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ABBREVIATIONS

- COPA: Cryptocurrency Open Patent Alliance
EBA: Opinion of the European Banking Authority
ECB: European Central Bank
EU: European Union
FATF: Financial Action Task Force on Money Laundering
FCA: Financial Conduct Authority
TFEU: Treaty on the Functioning of the European Union
USA: United States of America

INTRODUCTION

Relevance. In the 21st century, the development of payment systems and types of currency is one of the most widespread topics. It becomes an integral part of our lives. So, the same situation with Bitcoin. As it is the first form of cryptocurrency in the world, It has a number of regulatory challenges and problems with understanding its legal nature.

However, among researchers and scholars, there is little discussion of the legal state of cryptocurrencies and the almost complete absence of work explaining the legal nature of Bitcoin. Because of this, there are cases of misunderstanding of the application and regulation of cryptocurrency. It is important to reveal this topic because this is a major challenge for EU private law and other countries. The relevance of the chosen thesis is high, as nowadays the legal state of Bitcoin is still the main object of discussion and a gap in legislation. Thus, the creation or modification of state law in the context of Bitcoin is in the first place.

Researched problem. The analysis of literature and different sources of chosen topics let us determine that the legal state of Bitcoin faces a lot of obstacles and challenges. The low level of development of this topic and imperfect legislative regulation in Europe and abroad leads to influential questions of this final thesis :

What particular characteristics of Bitcoin should be regulated by EU and state authorities in order to enhance its legal state by EU private law?

Does the legal system of the European Community, countries as Luxembourg, Denmark, France, Lithuania, Estonia, Finland, and Germany as well as non-EU members as Switzerland, the USA, and Ukraine give clear legal regulation of Bitcoin in order to provide its legal state?

What are the recommendations, guidances, and conferences of the EU authorities are interpreted to regulate Bitcoin`s future legal regulation, and what kind of changes in state legislation should state authorities implement in order to provide a distinct Bitcoin legal regulation?

Scientific novelty and overview of the research on the selected topic. The Final thesis includes different points of view of the legal state of Bitcoin. Various scholars have attempted to uncover the legal aspects of Bitcoin regulation. For the most part, these works addressed the legal issues of cryptocurrency regulation, both in the European Union and in other countries. In particular, the emergence of Bitcoin, its main characteristics, as well as elements has been described and analyzed by Larina Olga¹, Šarūnas Galgauskas², and Robbeck A. Ye³.

¹ Larina Olga, "Prospects for the development of legal regulation of the cryptocurrency market in Russia", E-Management, № 4, (2019),

<https://e-management.guu.ru/jour/article/view/71/47>

² Šarūnas Galgauskas, Modelling the Dynamics of Bitcoin , Ethereum, Ripple Including COVID-19 Impact (master thesis, Mykola Romeris University, 2021),

<file:///C:/Users/%D0%BD%D0%B0%D1%82%D0%B0%D0%BB%D1%>

³ Robbeck A. Ye. "Bitcoin as a Phenomenon in the World Economy", Vestnik NEFU, 6, (2014)

The book “*How to make Bitcoin's*” by *Ruslan Akst* represent a modern view on the problematic topic.⁴ Specifically, this book greatly describes the history of Bitcoin from the early start. In addition, the author divides the length of Bitcoin history in few phases and determine the current phase of this cryptocurrency.

Mikhail Korzhanevsky in his work also concentrated on the legal regulation of Bitcoin in the European Union and foreign countries. Furthermore, he determined the weak sides of Bitcoin’s legal regulation and the problem of its legal state.⁵

*Loredana Maftai*⁶ develops ways of the future of virtual currency and in which forms Bitcoin can exist nowadays. As well, *Ivanyuk Victoria*, in her dissertation, drew attention to the international practice of legal regulation of Bitcoin circulation. Also, she tried to identify the current state and methodology of research of legal relations arising in the field of cryptocurrency circulation.⁷

The contribution of this Thesis consists of new ways of improvement and future changes in the legal state of this cryptocurrency in the legislation of EU and/or countries in order to officially consolidate the existence of Bitcoin and ensure its use in the future. This novelty fills the gap with a poorly investigated aspect of Bitcoin development and propose changes in the existing state legislation and or/and creating new instructions, guidances and policies with the aim to take control of the illegal transactions of Bitcoins and ensure the trust of cryptocurrency users.

Significance of the final thesis. Every person who is interested in EU law issues and wants find out what Bitcoin is, Its legal state, and the nature of current and future challenges in law will definitely benefit from reading this Master Thesis. What is more, this Final Thesis will be a helpful tool for scientists who prepare their scientific works and scholars who want to improve their knowledge on cryptocurrency issues.

The conclusions and recommendations of this research will help legislators to regulate the legal provisions on Bitcoin and determine its legal nature. Also, the above provisions of this work will help prevent the uncontrolled use of Bitcoin, ensure access to it by all full users and indicate requirements for the use of Bitcoin.

⁴ Ruslan Akst, *How to make Bitcoin's* (Litagent Rider, 2017)

⁵ Mikhail Korzhanevsky, “Legal regulation of cryptocurrencies in the Republic of Belarus and foreign countries: a comparative legal study” (master's thesis, European Humanities University. Academic Department of Social Sciences, Vilnius, 2019), https://eu.docworkspace.com/d/sILmpt_9M2O2jjAY

⁶ Loredana Maftai, “Bitcoin - between legal and informal”, CES Working Papers, https://ceswp.uaic.ro/articles/CESWP2014_VI3_MAF.pdf

⁷ Ivaniuk Viktoria, “Financial and legal regulation of cryptocurrency market in Ukraine”, (dissertation, Western Ukrainian National university, 2021), <https://www.wunu.edu.ua/svr/disertacia/ivanuk/dusertacia.pdf>

Aim of research. The main purpose of this research is to identify the nature of Bitcoin, and its place in EU law and law of other countries, as well as provide developments and changes for the legal basis of states in the context of Bitcoin.

Objectives of research. The main objectives of this research are :

1. To determine the main concept, definition, and elements of Bitcoin and describe its history and origination.
2. To assess Bitcoin's legal state in EU private law and consider legal regulations of Bitcoin in countries outside EU association.
3. To identify the future of Bitcoin's legal state and assign proposals for the legal regulation of cryptocurrency circulation in EU private law.

Research methodology. Particular research methodology is used in this Thesis. For instance:

- *Data collection* in the process of gathering information related to the topic of work.
- *Analysis* of literature on Bitcoin concept through historical perspective. Analysis of the different types of money, the number of supporters of Bitcoin, characteristics of Bitcoin.
- *A comparative analysis*, between Bitcoin and paper money (fiat money) in order to describe the legal state of Bitcoin and what regulatory challenges it can meet.
- *Explanation* of the definition of Bitcoin and cryptocurrency through scientific and legal perspective.
- *Classification* of EU member states which have at least minimal level of legal regulation of Bitcoin and countries with a lack of legal regulation in the field of Bitcoin.
- *Generalization* of gaps in the state's legislative regulation of cryptocurrency and, conversely, good experience in its regulation in order to identify the necessary changes and improve such provisions.
- *Structural and functional methods* in the designation of Instruction on the provision of services in the field of the cryptocurrency market in order to insert new provisions.

Structure of the research. It consists of three chapters and two subchapters in each of them.

The general part focuses on the historical development of Bitcoin. In particular, Bitcoin will be considered as the newest form of money. A comparison will be made between Bitcoin and paper money (fiat money). The period of Bitcoin's appearance and the court case about the determination of the real author of Bitcoin is also considered. Also, the first paragraph of the work is devoted to the specific definition of Bitcoin. An attempt will be made to correctly define the concept of Bitcoin through the study of definitions of cryptocurrency. Attention is paid

to the concept of virtual currency, as well as the main characteristics (features) of Bitcoin. Moreover, the section provides an analysis of the positive and negative sides of Bitcoin.

The next part describes the legal nature of Bitcoin and cryptocurrency in the Directives, reports, opinions, and recommendations of authorized persons and bodies of the European Union. The section sets out the courts' findings in Bitcoin cases. The focus of this section will be on the legal regulation of Bitcoin in countries of the European Union and countries outside this association or only in the process of joining it.

In the final, the work will be devoted to the attempt to determine the future existence of Bitcoin at the legal level and will analyze the measures that serve to ensure full regulation of the legislation of this cryptocurrency. Particular attention is paid to a new challenge for Bitcoin in the form of an epidemic situation. An analysis of how it influenced the development and consolidation of Bitcoin. Moreover, some changes will be proposed to improve the legal status of Bitcoin based on the successful experience of a number of states.

Defense statements.

1. The unprecedented case of Bitcoin leads to a small number of studies on this topic, as well as decentralized characteristics which are not regulated by EU and state authorities in order to provide Bitcoin legal regulation. The creation of single law on the definition of Bitcoin is a central issue.
2. Existing EU law Regulations and Directives on legal regulation of cryptocurrency are not appropriate for the complete regulation of problematic aspects of Bitcoin, since it does not include decentralized character and technical features of cryptocurrency. State regulation of cryptocurrency has a weak influence on the regulation of Bitcoin since its an absence or poor functioning.
3. Bitcoin regulation is effectively carried out only at the local level of Germany, Switzerland, and Japan. The improvement of the existing legal norms and the creation of special legislation that could be applied in practice at the European and International level is essential for ensuring the protection of cryptocurrency users, the existence of Bitcoin, and the prevention of illegal cryptocurrency transactions.

1. BITCOIN AS A NEW ELEMENT IN THE PAYMENT SYSTEM

Before deepening into the issue of the legal state of Bitcoin, it is important to understand the appearance and origin of such a phenomenon as Bitcoin. What is more, influential points such as the historical length of Bitcoin, its place in the payment system, and its various changes deserve special attention.

1.1 History of Bitcoin

The history of the emergence and development of money must be known for the most authentic and clear understanding of the appearance of Bitcoin, and its legal state. It is well known that Bitcoin as a cryptocurrency is the next step in the evolution of money. It is obvious that the primary reasons for the emergence and development of Bitcoin lie in the history of the development of money. Furthermore, it was the emergence of money as a measure of the value of individual goods that initiated a long and complex process of evolution and, ultimately, the formation of a modern financial and economic system, where there are both paper money, expressed in material form, and electronic money, which by themselves can still be divided into several types.

To understand the current nature of Bitcoin, we would need to look at the evolution of money, which is divided into a few steps. Firstly, **commodity exchange**, which was the first and most important stage in the development of the institution of monetary relations. One commodity as a measure of value for other commodities is a truly revolutionary step of that time, which, in a certain sense, also has an imprint on real monetary relations, since Bitcoin can also be called “a measure of value for all other currencies”.

The next step in the evolutionary development of money is the emergence of **metallic money**. It is also necessary to note one influential point here, namely that the appearance of gold as a type of monetary unit contributed to the beginning of the formation of a sense of trust in the currency in people since gold was a very durable, precious metal. However, gold, like other metals, was not an endless economic resource. The limited availability of fossil precious metals in a certain way influenced their value, and therefore, metal money was very expensive in terms of production and circulation.⁸

We would need to highlight the sense of trust in the currency, which was formatted in the early beginnings. For now, it is still the main object of Bitcoin regulation. One of the most reliable ways to provide this trust is the distinct legal regulation of cryptocurrency.

Furthermore, Bitcoin has a lot in common with **gold**. First, when the concept of Bitcoin was created, the idea was not about getting another paper currency that can be printed many

⁸ Maramygin M.S., Prokofieva E.N. and Markova A.A. “Virtual money (cryptocurrencies)”, *Izvestia USUE*, (2015), 37

times on an affordable printing press. The idea was to get Bitcoin as an analog of gold, only in digital form. Bitcoin was conceived by analogy with gold as a financial asset that is not part of the monetary system and can be completely private. There is no need to have permits or intermediaries to transfer ownership of Bitcoin. Bitcoin, like gold, was not supposed to depend on the government of any country. With a change of government, its rate will not change, as, for example, with fiat money. Bitcoin is meant to be a property that doesn't have to pay taxes; and, of course, Bitcoin must be money in itself.

Gold is a limited resource, it can only be mined as much as nature is produced. The same principle of limited is embedded in the Bitcoin mining algorithm. There will be only a limited number of Bitcoin crypto coins in the world - 21,000,000 coins and no more. It is determined that it is impossible to issue more than the stated number of coins, and what is important is that the mining, or Bitcoin mining, will end by about 2040.⁹

Gradually, **paper money** came to replace metal money. In the next step of evolution, with the development of information technology, electronic money was introduced to the world, the main advantage of which was ease of use.

In order to further increase the efficiency of monetary circulation, there is a **rejection of paper technologies**. In this stage of evolution, there are conditions for the emergence of a new generation of settlement tools - electronic payment systems and virtual money.¹⁰

Electronic money is the closest type of money to Bitcoin and cryptocurrencies at this stage of development of the money system. In some scientific works, electronic money is determined as a type of currency that is only available in digital form, but is not available in physical form, for example, in the form of banknotes or coins.¹¹

The appearance of the Internet has made it possible for society to simplify the use of money in various fields, creating a completely new kind of money - **digital (or electronic)**. At the same time, digital money retains its basic functions without losing its value, even without being physical in real life. In this regard, we consider the opinion that cryptocurrency, in particular Bitcoin, is the next step in the development of electronic money, because it is able to provide even more convenient and reliable ways to use it among people and organizations.

In addition, more separate types of electronic money appeared, such as, for example, virtual money in online games. Finally, cryptocurrencies appeared, which had the main advantages of anonymity and independence from the authorities. Cryptocurrencies arose out of

⁹ Maramygin M.S., Prokofieva E.N. and Markova A.A. "Virtual money (cryptocurrencies)", *Izvestia USUE*, (2015), 38

¹⁰ *ibid*, 39

¹¹ Andrey Urlin, "History of cryptocurrencies: Bitcoin detective", *Ridero intelligent publishing system*, (2018): 25

the need and desire to make a type of electronic money that would have the least dependence on the state.

We share the opinion that the creation of Bitcoin became the time of the first cryptocurrency in the world was generated. Bitcoin is one of the first, and at the same time, the most famous cryptocurrency in the world. In October 2008, on the site Bitcoin.org, a user under the pseudonym Satoshi Nakamoto posted a description of a cryptocurrency called Bitcoin. In early 2011, Jed McCaleb launched an exchange MtGox, which allowed exchanging Bitcoin's for "real" money and vice versa. The initial cost of Bitcoin on MtGox at the beginning of sales was 5 cents, but in November the rate jumped to 50 cents. On February 9, Bitcoin became at the same level as the dollar.¹² In addition to Bitcoin, there are also cryptocurrencies such as Ethereum, Litecoin, Bitcoin Cash and many others, the rates of which are also constantly changing.

On the other hand, to describe the legal state of Bitcoin and what regulatory challenges it can meet, It is recommended to provide the characteristic and detailed analyzes of the main differences between **Bitcoin** and **paper money (fiat money)**. Maramygin M. S in his work correctly described the difference between these two forms of money. This comparison is reflected in the Table 1 of Annex 1.

In this table, the author tried to highlight the main differences between Bitcoin (cryptocurrencies) and ordinary non-cash money. In particular, the main differences are in the scale of use, as well as in the degree of risk in use.

The information from the table lets us determine that Bitcoin and cryptocurrencies are not regulated in any way and are not provided by authorized bodies, which means that there can be no liability because of the absence of control and interference from the state, state bodies or the national bank.

The legislatures of many countries are practically devoid of intelligible legal provisions in private law regarding Bitcoin and virtual currencies since their nature is also not fully understood by many government officials. This uncertainty about the Bitcoin phenomena is one of the main reasons for the lack of legal regulation of cryptocurrencies. Also, legislators should always take into account the risks of using anonymous virtual money, but do not justify the ban on the use of cryptocurrencies in the country, since the advantages that cryptocurrencies provide outweigh their disadvantages.¹³ The pros and cons of Bitcoin will be described in the next subchapter.

¹² Robbeck A. Ye. "Bitcoin as a Phenomenon in the World Economy", Vestnik NEFU, 6, (2014), 115.

¹³ Mikhail Korzhanevsky, "Legal regulation of cryptocurrencies in the Republic of Belarus and foreign countries: a comparative legal study" (master's thesis, European Humanities University. Academic Department of Social Sciences, Vilnius, 2019), 17, https://eu.docworkspace.com/d/sILmpt_9M2O2jjAY

In general, the problems of legal regulation of Bitcoin faced by the states can be described according to a few clear reasons. Firstly, the **decentralized system** does not allow centralized regulation. The emergence of a decentralized system in a field that was previously subject to strict state control means a struggle between centralized state legal regulation and decentralized self-regulation mechanisms. Blockchain allows cross-border, global data exchange. Accordingly, the same issues arise for the regulation of Bitcoin and for the regulation of global networks as well, in particular, the issue of extraterritoriality on the Internet. Each state has its own traditions in the legal regulation of information technology, international regulation in this area is minimal. The only related area in which strong international cooperation operates is the fight against money laundering. What is more, there are almost no recognized practices of legal regulation in the field of Bitcoin. So, it requires the application of legal norms from various industries to solve various difficulties.¹⁴

Taking into consideration above given reasons about the complicated position of Bitcoin in the legal state, we are concluding that the regulatory framework of some countries will face important challenges in the way of implementing provisions considering Bitcoin. This issue will be discussed in the next chapter.

Subsequently, in 2017 the information chaos that reigned on the Internet due to the incessant fall in the Bitcoin rate, and then almost doubled rapid growth of this rate, has attracted the attention of thousands of potential users.

In fact, in the few days of 2017, cryptocurrencies fell in all directions, and many cryptocurrency holders urgently sold all of them, deciding that this is the end of all cryptocurrency fraud that has continued for the past eight years.

However, another part of users decided to keep cryptocurrencies. Analyzing the situation and opinions of different sides, we can determine the fact that there were many supporters of Bitcoin, who assume that in the history of the most popular cryptocurrency the crisis occurred with the aim to strengthen the position of Bitcoin, and it will cope with the difficulties and still show tremendous growth. As a result, those who turned out to be more hardened and resistant to the rapidly changing growth of the Bitcoin exchange rate ended up winning almost twice.

It is important to mention that Bitcoin as a product of cryptography has not even passed into its second stage, the stage of growth. Bitcoin, like any new technology, is undergoing the same process in its evolution. For now, it is still in the **formation phase**. We consider that

¹⁴ Yankovsky R.M., "Problems of legal regulation of cryptocurrencies", № 1, (2018), 48

Bitcoin will remain at this stage for a long time until its proper regulation is developed and put into effect.

From the legal perspective of view, the term cryptocurrency is not used very often, and for the most part, its definitions and characteristics are differing. On the other hand, the concept of crypto money is not ordinary, if make a deeper analysis of the word cryptocurrency.

The concept of cryptocurrency is directly related to the concept of Bitcoin because Bitcoin is, as we correctly mentioned before, the very first decentralized cryptocurrency. Bitcoin cannot be tasted like gold, or, like paper money, it is impossible to take it in hands and physically feel it as a material.

Bitcoin is a virtual digital currency, a kind of mathematically created value for carrying out mutual settlements and simplifying trade in various goods and services on the Internet. It is nothing more than a digital coin. It is very important to understand that Bitcoin is not only a coin, it is a peer-to-peer payment system that has its own unit of account.

Bitcoin in the meaning of a crypto-coin is a unit of account within the Bitcoin system and can be transferred from one person to another through encrypted cryptographic characters. This transfer of value is called a **transaction** and is carried out from one Bitcoin address to another.¹⁵

Due to the fact that not a single bank or state in the EU or abroad has levers of control in the Bitcoin system, an incorrectly executed transaction in the system cannot be canceled or corrected by any bank. All risks and responsibilities for an incorrect transaction fall entirely on a person who is the sender of Bitcoins.

Analysis of the historical background of Bitcoin allows concluding that Bitcoin dates back to 2008 which was the year of the global financial and economic crisis. The preconditions for the financial crisis are the 2007 American mortgage crisis. As a consequence, it affected the economies of the whole world.

The crisis was so severe that it left a deep mark on all aspects of legal, economic and political well-being. In particular, in this period was the massive bankruptcy of world-famous financial institutions. These include Lehman Brothers and other prominent financial institutions.

Lehman Brothers are known as one of the top of the most reputable and reliable US banks. The filing of a bankruptcy lawsuit meant the fall of all the stereotypes by which banks in the United States of America were previously appreciated.

In January 2009, the emission of Bitcoin begins by an unknown Japanese or, as other parts of researches think, by a group of people called **Satoshi Nakamoto**. According to other information, there was no Japanese who mystically disappeared at all, and the Bitcoin

¹⁵ Ruslan Akst, *How to make Bitcoin`s* (Litagent Rider, 2017), 5.

technology itself is only the development of special services that meticulously developed and skillfully introduced a tool called Bitcoin to the world market.

Among other reasons, the need for the emergence of Bitcoin as a tool for anonymous financing of global terrorism is considered. Other opinions said that Bitcoin is conceived as a mechanism capable of withdrawing capital anonymously from any country in the world and in this way greatly undermines the economy of any country.

Economists and financiers prolong various discussions on this topic.¹⁶ We share the opinion that there won't be only one idea about the emergence of Bitcoin. What is more, in the near future there will be only hypotheses about how Bitcoin is created and the name of its real inventor.

In 2008 there was a discussion between researchers and scientists, in which Satoshi Nakamoto substantiated the concept and principle of operation of the crypto-coins circulation system. The issue was very vigorously discussed on various Internet forums and aroused great interest among many people from the Internet community and the world of cryptography.

In January 2009, Satoshi Nakamoto publicly released a working system representing the first software required to create a digital currency. This system was intended to create a crypto-coin that does not have a physical medium and involves the generation of a code. To get this code, there should be a performance of complex mathematical calculations.

The problem of identification of the creator and author of Bitcoin is an integral part of this cryptocurrency history. The date of the official creation of Bitcoin is the purchase of the domain "Bitcoin.org" in August 2008. It was bought by Satoshi Nakamoto, who on October 31 published a **white paper** on the aforementioned website titled "Bitcoin: A Peer — to — Peer Electronic Cash System".

As it was mentioned before in 2009, Nakamoto posted version 0.1 of the Bitcoin and blockchain software on SourceForge, a resource where developers share open-source software, and mined the first 50 Bitcoins himself.

Nakamoto is a pseudonym, and there is no trace leading to his (or her) personality. In conversation with his fellow developers, Nakamoto tried to never reveal any identifying information.

For now, according to some informational web sites, **Craig Wright** identified himself as Satoshi Nakamoto and on Friday, June 28, 2019, at West Palm Beach, Florida, U.S., filed a copyright infringement lawsuit against the anonymous operator and publisher of the Bitcoin .org

¹⁶ Ruslan Akst, *How to make Bitcoin`s* (Litagent Rider, 2017), 6-11

website. This lawsuit could finally indicate the real author and personality of who actually invented Bitcoin cryptocurrency.¹⁷

According to the lawsuit, Wright accuses Bitcoin.org of copyright infringement by exposing the infamous official document on Bitcoins, which he claims he wrote in 2008. He asks the court to force Bitcoin.org to remove the white paper from the server, but the site, in turn, refuses. The plaintiff's goal is to provide evidence that he is the author of the 2008 White Paper and thus that he is Satoshi Nakamoto, a pseudonym used by the creator of Bitcoin.

The court material indicates that it is recommended for the claimant, as the most compelling evidence, to provide the demonstration of some of the first Bitcoin's mind by Satoshi Nakamoto. The opinion of experts is that the inventor (or inventors) of Bitcoin has mined a portfolio of over 1 million Bitcoins. Nowadays, the price of this portfolio would be worth under \$50 billion.

The success of the lawsuit is likely to depend on whether the plaintiff proves that he is indeed the author of the white paper, mentioned before, that originally laid out the technology of Bitcoin. According to the plaintiff's testimony, he has evidence to prove he is the author of the white paper.¹⁸

Furthermore, following the development of this case, the High Court of London ruled on June 28 on the claim of a researcher at the blockchain solutions company Craig Wright, against the anonymous owner of the Bitcoin.org website under the pseudonym Cobra. The decision was made by default because the defendant, one of the leaders in the field of cryptocurrencies, did not defend himself, maintaining anonymity. In result, the owner of the Bitcoin.org website is not allowed downloads or any other use of the white paper in the UK. Cobra has to post the court's decision, as well as pay legal costs - about \$50,000.

Also, according to the court material, the claimant proves that he is Satoshi Nakamoto and the creator of Bitcoin, providing information that in February 2020, a computer engineer's home network was hacked, allegedly losing encrypted keys and the ability to use his \$5.7 billion cryptocurrencies.

The defendants dispute the claim and call the computer scientist's arguments fake. What is more, the Cryptocurrency Open Patent Alliance (hereinafter COPA) has filed a lawsuit

¹⁷Tom Huddleston Jr., "A new lawsuit could weigh in on who's the real inventor of Bitcoin -why its creation is still shrouded in mystery", CNBC.com, Accessed 24 April 2021, <https://www.cnbc.com/2021/04/24/uk-Bitcoin-copyright-lawsuit-the-mystery-behind-Bitcoin-s-creation.html>

¹⁸ ibid.

against Wright to acknowledge that he has nothing to do with the creation of Bitcoin's master document.¹⁹

Thus, we clearly see from the above information and analysis of the lawsuit of the “real” creator of Bitcoin that at the moment there are no exact and reliable facts about who exactly is Satoshi Nakamoto and who is the author of the idea of the first cryptocurrency. Moreover, the evidence presented by Craig is weak and easy to challenge. In fact, the very complexity of the mechanism of Bitcoin and its environment makes it difficult in any case to determine its true creator. Therefore, there is a high probability that we will never be sure of the true authorship of the most popular cryptocurrency.

In summary, the complexity of the Bitcoin mechanism and the novelty of the idea lead to the fact that it is still at the stage of formation and adaptation. This subparagraph showed the place of Bitcoin and compared it with the usual type of money. The main categories of differences were identified. This analysis led to the difficulties of Bitcoin adaptation to national legislations, which were mentioned. Uncertainty about important moments in the history of Bitcoin, such as its authorship, still remains open.

1.2 The main Concept and Elements of Bitcoin

In the previous subparagraph, we concentrated more on the history of Bitcoin. There was only an attempt to give an approximate and concise definition of what Bitcoin is. This subparagraph will reveal a more detailed and broader study of the definition of Bitcoin, its main characteristics, and its negative and positive sides.

According to different studies and scientific works, Bitcoin is a cryptocurrency. Bitcoin is not only one cryptocurrency, there are other types such as Ethereum, Litecoin, Bitcoin Cash, and many others. Thus, we conclude that cryptocurrency is very brought meaning, and it is better to define the exact definition of this concept first.

Each company is constantly looking for the fastest and most convenient way to make transfers and payments, which are necessary for the development of their statuses. Various forms of money transfers are currently in use. Most of them were originally in paper form, then, with the development of technology, they acquired an electronic form. The introduction of innovative financial technologies contributes to the transition to a digital form of their implementation.

One such financial technology is a distributed ledger system or blockchain technology that operates on the basis of protocols (rules) for accounting transactions with **digital currencies**

¹⁹ Sebastian Sinclair, “UK Court Orders Bitcoin .org to Remove White Paper Following Craig Wright Lawsuit”, CoinDesk.com, Accessed 29 June 2021, <https://www.coindesk.com/markets/2021/06/29/uk-court-orders-Bitcoin-org-to-remove-white-paper-following-craig-wright-lawsuit/>

or **cryptocurrencies**. The name "**cryptocurrency**" or "**cryptographic currency**" comes from the encryption technology "cryptography", therefore this name can be considered as a technological.²⁰

The emergence of digital currencies (cryptocurrencies) has caused a wide discussion in the world among scientists and practitioners, especially about the formation of state regulation of their use when making transfers and payments.

D. A. Kochergin notes that cryptocurrency is a digital expression of the value of a purchase or sale in digital form and can be used as a medium of exchange, a unit of account, a means of storing value.²¹

A.V. Yakubov and V.A. Kuznetsov define it as an electronic means of payment, with a centralized accounting of operations according to the corresponding protocols or rules and excluding the participation of an external administrator.²² I.I. Kucherov defines it as a means of payment issued in a specified monetary unit and officially introduced by the state, which is accepted in its territory and used in a specific manner.²³

Thus, analyzing the above-mentioned definitions of scientists about cryptocurrency, we conclude that cryptocurrency can perform different functions. This phenomenon includes various functions which, of course, are characteristic of Bitcoin as well. For example, digital expression, decentralization, and the absence of external administration. But the proposed definitions of the concept of cryptocurrency do not fully reflect its essence, as it focuses on the technical aspect of this concept and does not disclose its legal meaning.

Nevertheless, in the European Union, the term "**virtual currency**" is used instead of "cryptocurrency". The term "virtual currency" has been in use since 2009, when Bitcoin was created, but this definition was officially enshrined in European Union (hereinafter the EU) Directive 2018/843 European Parliament and the Council only on 30 May 2018. In this Directive EU defines virtual currency as a "digital representation of value that is not issued or guaranteed by a central bank or a public authority, is not necessarily attached to a legally established currency and does not possess a legal status of currency or money, but is accepted by natural or legal persons as a means of exchange and which can be transferred, stored and traded electronically."²⁴

²⁰CINDX, "What Is Crypto, Actually", Accessed 25 November 2021,

<https://medium.com/cindx/what-actually-crypto-is>

²¹Kochergin D.A., Place and role of virtual currencies in the modern payment system, (Bulletin of St. Petersburg State University, 2017), 119-140.

²²Kuznetsov V.A. and A.V. Yakubov, On approaches to international regulation of cryptocurrencies (Bitcoin) in certain foreign jurisdictions, (Money and Credi, 2016), 20-29.

²³Kucherov I.I., Legal tender as a category of financial law (Journal of Russian Law, 2014), 38-47.

²⁴ Directive (EU) 2018/843 of the European Parliament and of the Council of 30 May 2018 amending Directive (EU) 2015/849 on the prevention of the use of the financial system for the purposes of money

We can notice that from the moment of creation and the legal consolidation of Bitcoin by EU legislators, 10 years have passed. Thus, a long period of time was needed only to integrate the definition of cryptocurrency into European legislation.

The **Financial Action Task Force on Money Laundering** (hereinafter the FATF) Guidance for a risk-based approach to virtual currencies, proposes the following definition of virtual currency (cryptocurrency) - “is a digital representation of value that can be digitally traded and functions as a medium of exchange; and/or a unit of account; and/or 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.”²⁵

The **European Central Bank** provides a similar definition of virtual currency as “a digital representation of a value that is not issued by a central bank, an e-money institution or a credit institution, but in certain situations, a cryptocurrency may be used as an alternative to money”.²⁶

A similar definition is formulated in the American dictionary **Merriam-Webster**, which defines that “cryptocurrency is any form of currency that only exists digitally, that usually has no central issuing or regulating authority but instead uses a decentralized system to record transactions and manage the issuance of new units, and that relies on cryptography to prevent counterfeiting and fraudulent transactions.”

It is important to highlight that there is no unified international practice for defining the concept and legal nature of cryptocurrencies. It follows that the same situation with Bitcoin as well. But it is highly significant to try to determine **Bitcoin definition** considering existing approaches.

The term "Bitcoin" is borrowed from the English language ("Bitcoin") and is formed by merging the words: "bit" (unit of computer memory) and "coin" (money).²⁷

Based on the analyzed characteristics of cryptocurrency, we consider that the following definition is the most appropriate for Bitcoin: “Bitcoin is a decentralized digital currency, without a central bank or single administrator, that can be sent from user to user on the peer-to-peer Bitcoin network without the need for intermediaries ”.²⁸

laundrying or terrorist financing, and amending Directives 2009/138/EC and 2013/36/EU (Article 1 (2 d (18)), Eur-Lex, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32018L0843>

²⁵ The Financial Action Task Force (FATF), Guidance for a risk-based approach to virtual currencies (2015), 26

²⁶ European Central Bank, Virtual currency schemes – a further analysis (Frankfurt am Main: European Central Bank, February 2015), 4

²⁷ Galushka E.O. and Pakon O.D., The essence of cryptocurrency and the prospects of their development, (Kyiv National University of Trade and Economics, 2017), 635 <http://molodyvcheny.in.ua/files/journal/2017/4/147.pdf>

²⁸ Wikipedia, Bitcoin (฿), Accessed 6 July 2021, <https://en.wikipedia.org/wiki/Bitcoin>

Disassembling this definition into parts, we can identify several significant features of Bitcoin. For example, these various characteristics of Bitcoin include:

- “ transactions don't require fees;
- electronic payments are confirmed in a very short time;
- because of the limited production of Bitcoins (21 million), there is a low risk of monetary inflation;
- there is a low risk of payment fraud, considering that the transactions are irreversible;
- there is no need of identification.”²⁹

We also would like to highlight other characteristics such as ease of use, anonymity, **decentralization**, and the **absence of external administration**. Decentralization plays an integral role in a legal state of Bitcoin. Decentralization implies self-regulation, and, some scientists believe that it is possible that this type of new monetary system will be able to function independently without harm to all participants in economic relations. But, the lack of practical legal experience only dispels misunderstandings on how to regulate a decentralized mechanism of Bitcoin without harming its users.

An attempt to regulate a **decentralized** system is already indicated as not worth considering the procedure, because of the system, which one of the main advantages is the distribution of basic functions to all participants in this system and the absence of government control over them by state bodies. So, this system can not function effectively under strict state regulations. The large-scale use of cryptocurrencies also creates problems for countries, because all of them have their own characteristics of the legal system.

The essence of any regulation, on the part of the state, is to ensure the most profitable and efficient operation of this area, as well as to establish general rules for subjects in this area. This is necessary so that these subjects do not go beyond what is permitted, as well as that they have equal rights and obligations with other subjects in a specific legal relationship. In addition, state intervention will help to exclude the commission of illegal actions, and they are also will be responsible for their implementation.

However, it is important to understand that modernity is challenging society, including the state, when many areas of its activity can already do without state intervention and regulation.³⁰

²⁹ Loredana Maftai, “Bitcoin - between legal and informal”, CES Working Papers, 57-58, https://ceswp.uaic.ro/articles/CESWP2014_VI3_MAF.pdf

³⁰ Mikhail Korzhanevsky, “Legal regulation of cryptocurrencies in the Republic of Belarus and foreign countries: a comparative legal study” (master's thesis, European Humanities University. Academic Department of Social Sciences, Vilnius, 2019), 29, https://eu.docworkspace.com/d/sILmpt_9M2O2jjAY

At the moment, the approach of self-regulation is becoming widespread. The technology-driven trend of self-regulation is either drastically reducing government intervention in specific areas or making it impossible. For example, aggregators of services combined with navigators (like Uber) make the legal regulation of taxi services ineffective.

It allows noticing that with the development of self-regulating systems, the need for any outside intervention begins to diminish. The same is happening with Bitcoin. Before states began to pass laws regarding virtual money, cryptocurrencies function without them. But it is a complex task to determine whether they functioned properly or not.

In this connection, Yankovsky R.M in his work, the detached situation when blockchain involves interaction with the legal system. It is important to understand that blockchain has a straight connection with Bitcoin as a register of transactions of various cryptocurrencies (including Bitcoin).

For example, it happens :

- 1) when assessing the legal consequences of transactions made by legal entities using the blockchain (taxation of income and profits of entities, accounting for their assets);
- 2) when challenging transactions, partially or completely made in the blockchain (including cross-border transactions);
- 3) when investigating offenses committed using the blockchain, etc.³¹

To our opinion, the detected situations allow concluding that the blockchain platform in which Bitcoin functioning as well as the mentioned cryptocurrency demand the existence of legal control and regulation.

So, based on the above-mentioned situations, It is clear that Bitcoin needs legal regulation exactly because of its decentralized character. Moreover, because of the absent of strict and clear legal rules and determination of a legal state of Bitcoin, the decentralized character of this cryptocurrency can attract some problems for users. What is more, if such issues with Bitcoin are constant, users will simply lose confidence in this cryptocurrency and all the benefits it brings will not be possible to use.

This creates difficulties in the formation of legal regulation, however, at the same time, without this state regulation, cryptocurrencies will be widely used in illegal transactions. In addition, the state itself is not interested in the existence of such a powerful monetary system, which would be completely decentralized and independent of higher authorities, since it goes beyond the control of the state. Also, anonymity and lack of control of Bitcoin can contribute to

³¹ Yankovsky R.M., Problems of legal regulation of cryptocurrencies (VII Moscow Legal Week "Modern Russian law: interaction of science, rule-making and practice", 2018), 49

the fact that cryptocurrencies will be used by underground illegal organizations, fraudsters who, due to the lack of supervision, will not be responsible for crimes.

Another important feature of Bitcoin is the **absence of external administration**. The picture is represented in Annex 2. This picture shows a great example of how the transaction of Bitcoin is going.

This picture illustrates and compares the transaction of Bitcoin and the dollar. In the case of Bitcoin, we do not have administration (Bank) but it exists in the case of dollar. The absence of external administration makes the process of transaction of Bitcoin more independent and faster without additional control.

In the end, the major role goes to the analyses of negative and positive sides of Bitcoin. On the one hand, analyzing the history and main concept of Bitcoin, we can highlight a lot of **advantages** of this phenomenon called Bitcoin. For example, Bitcoin is :

- stimulating the development of national jurisdiction, innovative technologies accompanying the development of the cryptocurrency market;
- source of income to the national budget from entrepreneurial activities related to the circulation of cryptocurrencies and trade;
- a new format for transferring funds, which allows, due to the absence of banks as intermediaries, to significantly reduce the size of the commission for transactions and increase their speed;
- a cryptocurrency, which allows for settlements with a significantly greater degree of confidentiality than settlements in fiat currencies;
- the integration of cryptocurrencies with smart technologies and other technologies that creates new opportunities for business and the consumption of goods and services;³²

From the determined advantages, we would like to highlight the stimulation of the development of national jurisdiction. The regulation of cryptocurrencies really expands the possibilities of national and international jurisdiction and makes it more resistant to new technological innovations. On the other hand, there are some significant **disadvantages** in the work and effectiveness of Bitcoin. These defects concentrated on the absence of a confident legal state and some regulations which could help with the risk of illegal action caused by users and others. So, it helps to determine the following minuses :

- reputational risks for jurisdiction because of the absence of security for doing business;
- the absence in most countries of legislative regulation of the use of cryptocurrencies - the rights of citizens and users are actually not protected;

³² Project “Prospects for legal regulation of cryptocurrencies” (P. A Stolypin Institute for Growth Economics), 3

- risks of fraudulent transactions in order to avoid taxation and withdraw capital from the country;
- risks of using cryptocurrencies for money laundering and legalization, for financing criminal activities;³³

Thus, from the mentioned above advantages and disadvantages of Bitcoin, we can conclude that the nature of the shortcomings of this cryptocurrency is significant and can have serious consequences for government and user safety and undermine the reputation of both Bitcoin and its legal regulations. Bitcoin is a significant challenge for legal regulations of any country however, it would be a mistake to point out that such a challenge is a negative sign of Bitcoin. Conversely, the emergence of this virtual currency gave motivation to the development of jurisdiction in technology sphere, consumer protection, providing new business opportunities and gave a chance for easier and freer order of money.

In conclusion, based on the fact that Bitcoin is still in the stage of formation, it brings many challenges for its legal state which is the most controversial. Despite the absence of an official definition of Bitcoin, it is still possible to determine its nature from the practice and researches prevailing at the moment. The above-mentioned characteristics and analysis of advantages and disadvantages of Bitcoin allow concluding that the legal state of Bitcoin requires more detailed study and improvement to exclude risks of illegal transactions and other actions contrary to the provisions of the law. In particular, the absence of external administration, decentralization, and anonymity as characteristics of Bitcoin are should be taken into account to determine the legal status of Bitcoin in European private law. The definitions, features, and characteristics of Bitcoin on the positive and negative sides further constitute the essence and importance in determining the legal state of Bitcoin in international union and in other countries.

³³ Project “Prospects for legal regulation of cryptocurrencies” (P. A Stolypin Institute for Growth Economics), 4

2. THE LEGAL STATE OF BITCOIN

2.1 Legality of Bitcoin in EU

Currently, the European Union legislation does not provide for direct regulation of Bitcoin and cryptocurrencies in general. Meanwhile, the first steps have been taken towards establishing rules for the use of cryptocurrencies, and some recommendations have also been developed from European authorities regarding the use of cryptocurrencies. In addition, there are already EU Directives, which to some extent affect the cryptocurrency sphere.

Because of the existence of not many regulations of cryptocurrency in the EU law, the legal problematic for some points of view is not so intense. The EU Electronic Money Directive (Directive 2009/110 / EC) has already set the boundaries to a certain extent for the legal acceptance of specific alternative payment methods, such as electronic and mobile.

From a more categorical point of view, It is noticed that **Directive 2009/110/EC of September 16, 2009**, cannot be considered a full-fledged international act that regulates operations with cryptocurrencies. The directive applies specifically to electronic money, which, although similar in some features to cryptocurrency, but however, they are not in their entirety.³⁴

Thus, paragraph 2 of the Directive establishes the following definition of electronic money: “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 as defined in point 5 of Article 4 of the Directive 2007/64/EC, and which is accepted by a natural or legal person other than the electronic money issuer”.³⁵

In the previous paragraph was discussed the topic of definition of Bitcoin. It is already determined that Bitcoin belongs to the term of **virtual currency** according to EU Directive 2018/843 European Parliament and the Council. It is important to understand, from the EU perspective, what is the difference between electronic and virtual money. The huge role in these plays the report of European Central Bank (hereinafter the ECB) “Virtual currency schemes” from 2012. Despite the fact that this report is not a legal act, it can be regarded as a certain type of recommendation of the central bank of the Eurozone for the EU legislative policy in relation to cryptocurrencies.

According to paragraph 1, point 2.2 of the Virtual currency schemes report, “Virtual currency schemes can be considered to be a specific type of electronic money, basically used for

³⁴Levy D.A, “Prospects for the recognition and development of cryptocurrencies in the European Union and European countries”, Management Consulting No. 9, 2016, 152

³⁵Directive 2009/110/EC Of the European Parliament and of the Council of 16 September 2009 on the taking up, pursuit and prudential supervision of the business of electronic money institutions amending Directives 2005/60/EC and 2006/48/EC and repealing Directive 2000/46/EC, EUR-Lex, Accessed 15 October 2021, <https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX%3A32009L0110>

transactions in the online world. However, a clear distinction should be made between virtual currency schemes and electronic money”.³⁶ This difference is reflected in Table 2 of Annex 3.

The most important difference according to this table is that virtual money is not considered a legal tender, unlike other electronic money. Also, in this report ECB highlight that “In electronic money schemes the link between the electronic money and the traditional money format is preserved and has a legal foundation, as the stored funds are expressed in the same unit of account (e.g. US dollars, euro, etc.). In virtual currency schemes, the unit of account is changed into a virtual one (Bitcoin). Firstly, these schemes rely on a specific exchange rate that may fluctuate, since the value of the virtual currency is usually based on its own demand and supply. Secondly, to some extent, the conversion blurs the link to traditional currency, which might be problematic when retrieving funds, if this is even permitted [...]”.³⁷ Also, in this report, we can find a statement that exactly electronic money cross throw a wide range of requirements, but virtual currencies like Bitcoin are not. Based on the provisions of this report, it is obvious that electronic money and virtual money, like cryptocurrency, have a different nature.

So, we consider a certain similarity with electronic money, but cryptocurrencies also cannot be part of them in accordance with EU legislation, and therefore, **Directive 2009/110/EC** cannot be considered a legal act that at least indirectly regulates the use and production of cryptocurrencies. Nevertheless, this report of the ECB gives clear definitions in distinguishing virtual money from electronic money.

Furthermore, according to other scientists, the legal regulation of cryptocurrency and Bitcoin fell under **2007/64/EC**.³⁸ This Directive is not in force anymore and according to Virtual currency schemes report by ECB, it regulated just execution of electronic money payment transactions and had nothing to do with the legal regulation of electronic money.³⁹ So, it did not regulate the virtual currency including Bitcoin as the legal regulation of this matter is clearly outside the scope of the Directive.

The next **Directive 2015/2366/EU**, which replaced **Directive 2007/64/EC** in the same way, will not apply to the field of cryptocurrencies, since it regulates a similar legal relationship as Directive 2007/64/EC.

Also, attention deserves **Directive (EU) 2015/849** of the European Parliament and of the Council of 20 May 2015 on the prevention of the use of the financial system for the purposes

³⁶Virtual currency schemes, (European Central Bank, 2012), 16,
<https://www.ecb.europa.eu/pub/pdf/other/virtualcurrencyschemes201210en.pdf>

³⁷ ibid

³⁸ Shaydullina V.K, “Legal regulation of cryptocurrency turnover”, Society: Politics, economics, law, (2018), 2, http://dom-hors.ru/rus/files/arhiv_zhurnala/pep/2018/4/law/shaydullina.pdf

³⁹Virtual currency schemes, (European Central Bank, 2012), 43,
<https://www.ecb.europa.eu/pub/pdf/other/virtualcurrencyschemes201210en.pdf>

of money laundering or terrorist financing. The provisions of Directive 2015/849/ EU are primarily referred to fiat money. However, the legal provisions of the Directive also affect electronic money, including the risks of their use.⁴⁰

However, as it was already determined, cryptocurrencies do not fully belong to electronic money, which means that they cannot be regulated by the same legal provisions that govern electronic money. In this regard, attention should be drawn to the **Opinion of the European Banking Authority** (hereinafter the EBA). First and foremost, this Opinion said that operations with virtual money do not fall under the Directive (EU) 2015/849, usually, this Directive is attributed to legislation governing cryptocurrencies by mistake. Also, this Opinion reminds about **Directive 2015/2366/EU**. In points 16 and 17 it mentioned: “The EBA notes that the co-legislators had called on the Commission to consider bringing Virtual Currency transaction into the scope of Directives in the financial sector, such as the revised Payment Services Directive (Directive (EU) 2015/2366, hereinafter referred to as PSD2). The EBA agrees with the Commission’s decision not to do so for now and to limit the scope of the proposed amendments, in view of the required urgency. The EBA’s views are based on its previous assessment, as conveyed in the EBA Opinion in July 2014, that suggests that, while some provisions of the PSD2 could potentially be suitable to address specific risks arising from virtual currencies, they (virtual currencies) as a rule incur additional, technology-specific risks that make them distinct from conventional fiat currencies that are in the scope of PSD2.”⁴¹ From the further explanation of the EBA, it is clear that cryptocurrency, in particular Bitcoin, has great technological features that cannot be addressed by this Directive 2015/2366/EU. Thus, we should not consider this Directive as a reliable legal act regulating cryptocurrency. The very opinion of the EBA lists the risks that may arise when using cryptocurrencies - this is what legislators of other EU countries should take into account when developing the regulatory framework for cryptocurrency activities.

This list included such risks as:

- the absence in the European Union of special regulation that could protect consumers from financial losses associated with the collapse of companies that own the appropriate technologies that ensure the exchange of digital currencies or with their decision to exit this business;

⁴⁰Directive (EU) 2015/849 of the European Parliament and of the Council of 20 May 2015 on the prevention of the use of the financial system for the purposes of money laundering or terrorist financing, amending Regulation (EU) No 648/2012 of the European Parliament and of the Council, and repealing Directive 2005/60/EC of the European Parliament and of the Council and Commission Directive, EUR-Lex, Accessed 15 October 2021, 2006/70/EC, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32015L0849>

⁴¹Opinion of the European Banking Authority on the EU Commission’s proposal to bring Virtual Currencies into the scope of Directive (EU) 2015/849 (4AMLD), 11 August 2016, 4, <https://www.eba.europa.eu/sites/default/documents/files/documents/10180/1547>

- in the case of making payments in digital currencies, the consumer will not have the right to a refund under European legislation (for example, if such transactions are canceled, the funds will not be refunded, as in the case of transactions with payment cards);
- if law enforcement agencies reveal that virtual currency exchanges are used for illegal purposes (for example, in the laundering of proceeds from crime), this may lead to their closure in a short time, and consumers will not be able to access or return their digital money;
- in the case of fraud in relation to digital wallets that store virtual currency placed on personal computers, laptops and mobile smartphones, their owners are not subject to the appropriate protection of European legislation.⁴²

We only can highlight that the listed risks are obvious, despite the optional character of the EBA opinion it is recommended to take this list into consideration by states legislators.

At the same time, EBA supports the Commission's view on the comprehension of virtual currencies in the provisions of the **Directive (EU) 2015/849**. But at the same time recommends a number of amendments in the sphere of virtual currency platforms (VCEP) in this Directive. So, for example, in paragraph 20 it is said that “The proposed amendments are limited to subjecting VCEPs and CWPs to the provisions in the Directive. But most other risks from virtual currency to consumers, firms and market confidence that the EBA had identified in its 2014 Opinion remain unaddressed. This includes risks arising from fraudulent or failed transactions; insolvency [...] ”.⁴³ Also, there were suggestions to add the definitions and characteristics of virtual currency platforms in Article 3 of this Directive, which is responsible for defining the main.⁴⁴

Thus, analyzing the opinion of the EBA, we can agree with the position that these recommendations were a big step and impetus for cryptocurrencies related to virtual money to eventually get a serious legal consolidation and the possibility of legal regulation at the international European level.

In October 2015, the **European Court of Justice** issued a preliminary ruling on the taxation of Bitcoin's, which was supported by the Swedish Revenue Law Commission, which in practice meant: transactions related to the purchase and selling Bitcoin in EU member states should not be subject to value-added tax.

⁴²Regulation of cryptocurrencies. Study of the experience of different countries, European Economic Community, 2017, 8, https://eu.docworkspace.com/d/sIL6pt_9MzPajjAY

⁴³Opinion of the European Banking Authority on the EU Commission’s proposal to bring Virtual Currencies into the scope of Directive (EU) 2015/849 (4AMLD), 11 August 2016, 5, <https://www.eba.europa.eu/sites/default/documents/files/documents/10180/1547>

⁴⁴Mikhail Korzhanevsky, “Legal regulation of cryptocurrencies in the Republic of Belarus and foreign countries: a comparative legal study” (master's thesis, European Humanities University. Academic Department of Social Sciences, Vilnius, 2019), 66, https://eu.docworkspace.com/d/sILmpt_9M2O2jjAY

At the same period of time, the European Court of Justice ruled that Bitcoin should be considered as currency (means of payment), not a commodity. At least in terms of taxation. Thus, transactions for buying and selling Bitcoin's for traditional fiat currencies should not be subject to value-added tax.⁴⁵

In addition, among other documents, opinions and works should be highlighted EBA Opinion on 'virtual currencies' from 4 July of 2014.⁴⁶ This document was considered when the Opinion of the EBA adopted the proposal of the EU Commission to include virtual currencies in the scope of the Directive (EU) 2015/849. The recommendations of the European Banking Authority were taken into account, and already in **2018**, another international legal act was adopted in the field of regulation of virtual money.

This is **Directive 2018/843/EU** of the European Parliament and of the Council of 30 May 2018. It is amending Directive (EU) 2015/849. This Directive made changes not only limited to the new definitions, but in addition to introducing new terms in Article 3 of Directive 2015/849/EU, also changes some articles of the section on risk assessment, provisions on the anonymity of payments and customer identification, and contains other changes, which, in one way or another, relate to the financial and payment systems of states, and the potential risks with the use of their instruments.

As it was discussed in the previous paragraph, Directive 2018/843/EU includes a definition of virtual currency and determine it as “ a digital representation of value that is not issued or guaranteed by a central bank or a public authority, is not necessarily attached to a legally established currency and does not possess a legal status of currency or money, but is accepted by natural or legal persons as a means of exchange and which can be transferred, stored and traded electronically.”⁴⁷ This definition is the first legal consolidation of cryptocurrencies at the international legislative level of the EU. Obviously, in this case, virtual currencies also mean cryptocurrencies, since there are almost all similarities in the definition itself.

All these characteristics are part of the cryptocurrency, but this definition cannot be considered complete. An equally important feature of any cryptocurrency is its cryptographic

⁴⁵Case C-264/14, request for a preliminary ruling under Article 267 TFEU, from the Högsta förvaltningsdomstolen (Supreme Administrative Court, Sweden), made by decision of 27 May 2014, received at the Court on 2 June 2014, InfoCuria, Accessed 16 October 2021,

<https://curia.europa.eu/juris/document/document.jsf?text=&doc>

⁴⁶ European Bank Authority, Opinion on 'virtual currencies', 4 July 2014

<https://www.eba.europa.eu/sites/default/documents/files/document/>

⁴⁷ Directive (EU) 2018/843 of the European Parliament and of the Council of 30 May 2018 amending Directive (EU) 2015/849 on the prevention of the use of the financial system for the purposes of money laundering or terrorist financing, and amending Directives 2009/138/EC and 2013/36/EU (Article 1 (2 d (18))), Eur-Lex, Accessed 16 October 2021,

<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32018L0843>

protection method. This definition does not include any word about **technology** (blockchain), thanks to which cryptocurrencies can function.⁴⁸

No less influential definition is **custodian wallet provider**, which was added by this Directive immediately after the definition of virtual currency. Custodian wallet provider means “an entity that provides services to safeguard private cryptographic keys on behalf of its customers, to hold, store and transfer virtual currencies.”⁴⁹ It is a new additional object with which it would be possible to monitor transactions with virtual currencies.

So, we can conclude that provisions of the Directive 2015/849/EC will also be applied to cryptocurrency, taking into account the changes introduced by Directive 2018/843/EU.

But in the work about legal regulations of cryptocurrency, the author detected that Directive 2015/849/EU itself is quite an unfavourable legal acts for cryptocurrency users. In short, Directive 2015/849/EU essentially proposes to eventually level out any anonymity in the use of cryptocurrency, it is quite important characteristic of cryptocurrency and Bitcoin as well. But this has its explanation, as the EU has long been fighting terrorism in all its forms and illegal financial transactions, the EU community trying to improve legislation and anticipate any risks.

For example, European Union Agency for Law Enforcement Cooperation well known as Europol has been monitoring the criminal use of cryptocurrencies. Its results in 2014 were published by Europol in the report "Internet Organized Crime Threat Assessment" which for the first time drew attention to the use of cryptocurrencies in criminal activities, mainly Bitcoins. One of the tendencies of which is the use of virtual currency for the purpose of money laundering, obtained as a result of committing cybercrime. Also, It is recognized the serious potential of virtual currency as an ideal tool for money laundering.⁵⁰

In a subsequent 2015 report, Europol released data that up to 40% of transactions using Bitcoins on computer networks are carried out for criminal purposes, more than a third of payments in cases of extortion on the Internet are carried out using cryptocurrency.⁵¹

Due to such a high risk of using cryptocurrency for criminal purposes, the Directive 2018/843/EU has made some changes for Directive 2015/849/EC: “identifying the customer

⁴⁸ Mikhail Korzhanevsky, “Legal regulation of cryptocurrencies in the Republic of Belarus and foreign countries: a comparative legal study” (master's thesis, European Humanities University. Academic Department of Social Sciences, Vilnius, 2019), 67, https://eu.docworkspace.com/d/sILmpt_9M2O2jjAY

⁴⁹Directive (EU) 2018/843 of the European Parliament and of the Council of 30 May 2018 amending Directive (EU) 2015/849 on the prevention of the use of the financial system for the purposes of money laundering or terrorist financing, and amending Directives 2009/138/EC and 2013/36/EU (Article 1 (2 d (19))), Eur-Lex, Accessed 16 October 2021, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32018L0843>

⁵⁰Internet Organised Crime Threat Assessment (iOCTA), 2014: <https://www.europol.europa.eu/activities-services/main-reports/internet-organised-crime-threat>

⁵¹Internet Organised Crime Threat Assessment (iOCTA), 2015: <https://www.europol.europa.eu/activities-services/main-reports/internet-organised-crime>

and verifying the customer's identity on the basis of documents, data or information obtained from a reliable and independent source, including, where available, electronic identification means, relevant trust services as set out in Regulation (EU) No 910/2014 of the European Parliament and of the Council (*4) or any other secure, remote or electronic identification process regulated, recognized, approved or accepted by the relevant national authorities".⁵²

The Directive applies to cryptocurrency exchanges, brokers and cryptocurrency wallet systems. Now platforms for exchanging cryptocurrencies for fiat money, as well as providing services for storing cryptocurrencies, will be required to conduct a preliminary verification of their customers, including their identification, as banking institutions have been doing for a long time.⁵³ In essence, cryptocurrency exchanges will operate under the same rules as all other financial institutions. This means that their activities will be monitored by government agencies, and mandatory identification of their customers will be introduced. Anonymity is one of the main reasons for people's trust in cryptocurrencies, and the establishment of mandatory or even possible identification will only worsen the situation with the use of cryptocurrency by ordinary citizens.

Finally, from an international legal point of view, the legal regulation of cryptocurrencies in the European Union is at a very early stage of its development. In fact, there is no specific international act that would directly regulate activities with cryptocurrencies. All we can proceed from the regulation of cryptocurrencies in supranational EU legislation is **Directive 2015/849/EU amended by Directive 2018/843/EU**.

But it is important to understand that such legal regulation of cryptocurrencies cannot be considered complete and even in some points of view reliable.

It is a common fact that no legal act gives a specific definition of cryptocurrencies. There is one definition of virtual currency, which is also understood as cryptocurrencies in EU legislation. At the same time, we designated that the Directives are devoid of legal requirements on the technical component of cryptocurrencies. And without the principles of understanding the work of cryptocurrencies, from a technological point of view, it is impossible to establish reliable, effective and fair rules for the use of Bitcoin. And the main problem of these Directives is that they establish rules in general for all virtual currencies (and this may also include, for example, money from virtual video games, etc.), while cryptocurrencies by their nature do not fit into these rules. For example, the provisions on the need to identify clients-users of virtual

⁵²Directive (EU) 2018/843 of the European Parliament and of the Council of 30 May 2018 amending Directive (EU) 2015/849 on the prevention of the use of the financial system for the purposes of money laundering or terrorist financing, and amending Directives 2009/138/EC and 2013/36/EU, EUR-Lex, Accessed 16 October 2021, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32018L0843>

⁵³Konyushkin V. Bazurin G. "End of anonymity of cryptocurrencies in the EU", *Liniya Prava. Digital technologies*, 2018, http://www.lp.ru/uploads/4269_Designed_24.04.2018

money received in any other way should not be applied to cryptocurrencies due to their **decentralization** and **anonymity**. And any attempt to establish control over cryptocurrencies will only have negative consequences since the creation of cryptocurrencies itself does not require intervention from the state or the national bank.

Therefore, the provisions of Directive 2015/849/EU will also be ineffective for cryptocurrencies in general. From this point of view, the issue of establishing technical criteria in the definition of cryptocurrencies at the legislative level is even more important.

The blockchain system is unique in its essence, and the mining of cryptocurrencies has a significant difference from ways to get virtual currency on the Internet, for example, in computer online games.⁵⁴ In this regard, it can be concluded that in the international legal arena, the regulation of cryptocurrencies in the EU is at a rather low level.

It is hard not to agree with this opinion, because only at first glance it may seem that EU law has taken a step towards meeting the legal regulation of cryptocurrency and Bitcoin inclusive. However, the amendments to the Directive only superficially concerned Bitcoin and did not take into account its specificities.

It has to be noted that the Directives are supranational acts, which means that subsequently, all member states of the European Union will have to bring their legislation under the provisions of these Directives. The EU's international regulatory experience is important precisely for its supranational essence of the cryptocurrency regulation. In coming times, such experience can help individual countries to adopt international legal acts in the field of cryptocurrency business, based on the principles and their national approaches to cryptocurrencies. However, all the listed Directives apply to the countries of the European Union, which must unify their legislation in accordance with international acts.

One of the most effective means of overcoming obstacles to the creation of a strong legal basis within the European Union is the harmonization of the legislation of the Member States with EU law. It is to bring the rules of the domestic law of the Member States of the European Union in line with the requirements of the law of association in order to create a high-level regulation of cryptocurrency issues.

⁵⁴ Mikhail Korzhanevsky, "Legal regulation of cryptocurrencies in the Republic of Belarus and foreign countries: a comparative legal study" (master's thesis, European Humanities University. Academic Department of Social Sciences, Vilnius, 2019), 69, https://eu.docworkspace.com/d/sILmpt_9M2O2jjAY

The Treaty on the Functioning of the European Union (hereinafter the TFEU)⁵⁵ does not define the concept of harmonization but provides for its fulfilment. It also defines the areas, methods and legal mechanisms for harmonizing the laws of the Member States with EU law.

The TFEU provides for harmonization within the framework of creating an area of freedom, security and justice, in regulating relations in the EU internal market, in certain sectors of cooperation including the Bitcoin field.

Harmonization of legislation does not require Member States to adopt the same legal acts. It is primarily a matter of the Member States applying similar laws or other legal acts. In this regard, the question of the approach to the modeling of harmonization acts is of high importance. Each Member State has the ability to choose whether such an act will combine several national laws, whether a national law will become the basis, or whether it will be new provisions that will have no analogs in the national legislation. Within the EU, the last model was preferred. There are no coincidences that the main legal acts by which harmonization is carried out in the European Communities are directives. This is directly stated in Art. 114 TFEU.⁵⁶ But this does not mean that the other two models have been completely rejected.

Unlike other harmonization measures, the application of minimum rules and standards allows the Member States to raise them in their legislation. Such deviation from the rules of EU law is not considered as a violation. Harmonization of legislation often provides the same legal conditions for citizens, but this is not always possible with Bitcoin regulation.

It is important to notice that, the TFEU and the case-law of the Union have identified circumstances that prevent the application of measures to harmonize legislation. It is the need to protect public morals, public order and public safety, etc.⁵⁷, and the protection of the environment and working conditions⁵⁸.

So, to our point of view, the prevention of the application of measures to harmonize legislation will be applied in some part to cryptocurrency regulation by the EU Member States. This is due to the fact that the use of Bitcoin and other types of cryptocurrency may lead to money laundering and terrorist financing, which are threatening the protection of public order and public safety.

⁵⁵Consolidated versions of the Treaty on European Union and the Treaty on the Functioning of the European Union - Consolidated version of the Treaty on the Functioning of the European Union - Protocols - Annexes - Declarations annexed to the Final Act of the Intergovernmental Conference which adopted the Treaty of Lisbon, signed on 13 December 2007 - Tables of equivalences, Official Journal C 326, 26/10/2012. Accessed 24 November 2021, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A12012E%2FTXT>

⁵⁶ *ibid*, Art. 114

⁵⁷ *ibid*, Art. 114

⁵⁸ *ibid*, Art. 114.4

But minimum harmonization gives the Member States the opportunity to decide for themselves how to achieve the objective set, using the legal instruments at their disposal under national law. It does not prohibit Member States from using higher standards for their own needs, The minimal harmonization is not an obstacle to further scientific and technological progress. The TFEU provision also states that a high level of protection should be taken into account when preparing proposals for harmonization in areas such as safety.⁵⁹

At first glance, it is difficult to determine which EU member states are supporters of Bitcoin and which states have recognized its existence and enshrined at least minimal legal regulation, and which have not recognized it at all. Therefore, it is worth defining a clear list and dividing it into several groups.

- List of EU states that have recognized the existence of Bitcoin without legal regulation: Belgium, Denmark, Ireland, Italy, Slovakia, Slovenia, Czech Republic, Estonia;

- List of EU states that have recognized the existence of Bitcoin and equated it with electronic money: Bulgaria, Finland, France, Croatia;

- List of EU states that have recognized the existence of Bitcoin and equated it to a commodity (thing, means of exchange): Spain;

- List of EU states that have recognized the existence of Bitcoin and equated it to a separate currency: Germany, Luxembourg, Sweden;

- List of EU states that have banned the use of Bitcoin : Lithuania (not a legal payment instrument).

In general, most of the countries of the European Union also have not established a full-fledged legal regulation of cryptocurrencies in national legislation, but they already have experience in regulating relations with cryptocurrencies. However, executive bodies of these countries are engaged in such regulation, which are trying to match the cryptocurrency sphere under the existing legislation. Thus, in April 2016, **Luxembourg** authorized the issuance of a license for one of the first public exchanges of cryptocurrency - Slovenian BitStamp - for

⁵⁹ Consolidated versions of the Treaty on European Union and the Treaty on the Functioning of the European Union - Consolidated version of the Treaty on the Functioning of the European Union - Protocols - Annexes - Declarations annexed to the Final Act of the Intergovernmental Conference which adopted the Treaty of Lisbon, signed on 13 December 2007 - Tables of equivalences, Official Journal C 326 , 26/10/2012. Accessed 24 November 2021, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A12012E%2FTXT>

operation throughout the European Union.⁶⁰ In addition to Luxembourg, many EU countries have also identified the main directions in the field of cryptocurrency regulation, in particular, special attention is paid to the taxation of cryptocurrencies. The official position of the **Danish** authorities is that cryptocurrencies are not currencies or commodities, therefore they are not subject to taxation. However, the Danish Financial Management Agency later clarified that it considers transactions with cryptocurrencies as a provision of services. And these types of activities are subject to taxation according to the standard scheme.⁶¹ Moreover, it is worth notice that in many EU countries, government bodies have different opinions about the nature of cryptocurrencies and the risks associated with their use, but at the same time, specific legal acts that would establish clear provisions with cryptocurrencies are not accepted by legislators. For example, the central bank of **France** issued a statement warning investors about the complex nature and speculative nature of cryptocurrency. However, it was only in 2014 that a proposal was voiced to regulate operators associated with the activity of cryptocurrencies by attracting a special agency.⁶² Moreover, France is also devoid of legislative regulation of cryptocurrencies.

Also, the **Lithuanian** relationship with cryptocurrency deserves special attention. In 2017 the Bank of Lithuania published its opinion about virtual currencies. It noticed that “financial market participants should not engage in the sale of virtual currencies, provide conditions for customers to pay in payment instruments issued by them (e.g. debit or credit cards, etc.), execute any operations in virtual currencies, and also engage in their exchange or similar activities. Moreover, in their means of communication (website, mobile application, platform, ATM, customer’s electronic account, etc.), they should not link their services to virtual currencies and create an impression that such services are supervised and subject to the same security standards as those applicable to financial services are.”⁶³ Lithuania introduces a strict policy of exchange and purchase of cryptocurrencies by leading the licensing and authorization procedures to avoid money laundering and terrorist financing. The application for crypto registration is available, but it includes detailed data verification and customer identification. In 2018 established a framework for Initial coin offering (ICO) in Lithuania’s Ministry of Finance “Guidelines for ICOs”. “ICOs involving a risk of the loss of investor’s funds are subject to investment-related legislative requirements. Income received from individual purchases and

⁶⁰Levy D.A, “Prospects for the recognition and development of cryptocurrencies in the European Union and European countries”, Management Consulting No. 9, 2016, 154

⁶¹ibid, 155

⁶²ibid, 155

⁶³“Bank of Lithuania announces its position on virtual currencies and ICO”, *Bank of Lithuania*, 11 October 2017,

<https://www.lb.lt/en/news/bank-of-lithuania-announces-its-position-on-virtual-currencies-and-ico>

sales of cryptocurrency is taxed at a fixed 15% personal income tax rate.”⁶⁴ More importantly, Lithuania provides two types of licensing for cryptocurrency. One of them is for the exchange of cryptocurrency against a fiat currency and another one is for keeping, storing and transferring virtual currency. The same way of regulation of cryptocurrency (including Bitcoin) is followed by **Estonia**.

Also, Lithuania took an active role in investigations into money laundering. For example, in 2016, ten people were arrested in the Netherlands as part of an international investigation into money laundering through the virtual currency Bitcoin. Banking institutions saw large amounts of funds in deposit accounts, which were quickly withdrawn by the bank's customers. Bank and Bitcoin accounts have been seized through international cooperation between the United States, Australia, Morocco and Lithuania.⁶⁵ Officials also note that criminals, working with illegal online stores that sell firearms, drugs, etc., often made payments using the virtual currency Bitcoin.

An interesting situation with the regulation of cryptocurrencies is in **Finland**. There, “in 2013, an instruction was issued for citizens and legal entities on the methods of taxation. According to which, tax agents are encouraged to consider cryptocurrencies as “not real, not official,” but at the same time being a means of payment. When making economic transactions, the receipt of cryptocurrency and its subsequent taxation should be assessed based on the method of acquisition. So, if the funds were obtained as a result of investment or exchange transactions, then the funds which were received proposed to be considered as a change in capital. At the same time, the cost of the cryptocurrency was determined by the price at the time of purchase. If the income was derived from “mining”, then such income is considered as ordinary income. In November 2014, Bitcoin was recognized by Finland as a financial instrument exempted from value-added tax.⁶⁶ Most recently, Finland adopted the Virtual Currency Providers Act, which comes into force on May 1, 2019.⁶⁷ This law provides for the registration of cryptocurrency exchanges and wallet providers to carry out their activities with virtual currency.

The adoption of such provisions in the country's legal act can be explained by the adopted amendments to Directive 2015/849/EU. In this regard, at this moment most EU countries have not yet established certain provisions regarding the use and functioning of

⁶⁴“Lithuania Cryptocurrency Laws, Regulation of Digital Currencies: Cryptocurrency, Bitcoin s, Blockchain Technology”, *Freeman Law*, <https://freemanlaw.com/cryptocurrency-old-2/lithuania/>

⁶⁵Alex Molodtsov, “10 people arrested in the Netherlands for money laundering with Bitcoin ”, PaySpace, 22 January 2016, <https://psm7.com/news/v-niderlandax-arestovali-10-chelovek-za-o>

⁶⁶Levy D.A, “Prospects for the recognition and development of cryptocurrencies in the European Union and European countries”, *Management Consulting* No. 9, 2016, 155

⁶⁷Act on Providers of Virtual Currency of the Republic of Finland, 26 April 2019 No. 572/2019, file:///C:/Users/%D0%BD%D0%B0%D1%82%D0%B0%D0%BB%D1%96%D1%8F/Downloads/0900908f8062bd90.pdf

cryptocurrencies at the legislative level, they were moving in this direction in varying degrees. However, the EU countries in most cases are limited to only public statements about activities with cryptocurrencies, without taking significant steps to establish legal requirements. Even the same Finnish Law “On Virtual Currency Providers” defines general rules for virtual currencies in general, while, as has already been found that cryptocurrencies have a lot of technical features that distinguish them from any other types of virtual money.

One of the leaders in the determination of the legal state of Bitcoin is **Estonia**. This EU country is required to obtain a license for cryptocurrency transactions: one - for the exchange of cryptocurrencies on fiat money, another - on storage of cryptocurrencies. It should be noted that from July 1, 2020, in Estonia the rules for obtaining both licenses have been strengthened to the level of those apply to traditional financial institutions. Thus, a company that provides cryptocurrency exchange and storage services is subject to the same requirements as any other financial institution operating in fiat money.⁶⁸

Estonia has implemented Directive (EU) 2015/849 and the draft Directive (EU) 2018/843 of the European Parliament and of the Council of 30 May 2018 to Directive (EU) 2015/849 (Rahapesu ja terrorismi rahastamise tõkestamise seadus), which entered into force on 27 November 2017.

Section 1 of Section 2 "Definitions", paragraph 3 clearly states that a virtual asset should be understood as a value presented in digital form, which can be digitally transmitted, stored or sold and which individuals or legal entities accept as a payment instrument, but is no means of payment of any country or means for the purposes of Article 4 of Directive (EU) 2015/2366, amending Directives 2002/65/EC, 2009/110/EC and 2013/36/EC and Regulation (EU) № 1093/2010, and repealing Directive 2007/64/EC or repealing the payment transaction for the purposes of Article 3 (k), (l) of that Directive.⁶⁹

In order to carry out cryptocurrency activities (provision of virtual currency exchange services for fiat money, virtual currency wallet services) in Estonia, the permission of the Money Laundering Information Bureau must be obtained. A statement on obtaining a permit can be submitted to the Register of Economic Activities, available through the portal www.eesti.ee or on the website <https://mtr.mkm.ee>. An operating license granted in another country of the European Economic Area does not entitle a person to operate in Estonia, and vice versa.⁷⁰ In

⁶⁸Ivaniuk Vicroria, Dissertation “Financial and Legal Regulation of Cryptocurrency Market in Ukraine (dissertation, Western Ukrainian National University, 2021), 166, <https://www.wunu.edu.ua/svr/disertacia/ivanuk/dusertacia.pdf>

⁶⁹Money Laundering and Terrorist Financing Prevention Act from 26 October 2017, Accessed 23 November 2020, <https://www.riigiteataja.ee/en/eli/517112017003/consolide>

⁷⁰Register of Economic Activities (Majandustegevuse registri (MTR)), Accessed 23 November 2021, <https://mtr.mkm.ee>.

addition, prior to the permit, legal entities must take measures to properly verify the fight against money laundering and terrorist financing against their clients, including the identification, verification and monitoring of each participant of legal relations.

Thus, it is clear from the example of Estonia that operations with cryptocurrency are widespread in this country. As it is considered, from 2020 operations with cryptocurrency are equates to any other financial institution operating in fiat money. This helps Bitcoin to acquire the characteristics of a commonly used virtual currency and become at the level of other types of money.

Another example that deserves attention is **Germany**. Germany is one of the leading countries in the EU and one of the most technologically advanced. What is more, Germany's approach to legal state of Bitcoin and cryptocurrencies, in general, is the most developed among other EU states. At first, different German authorities had different opinions about cryptocurrency, for example, "In August 2013, the German Ministry of Finance announced that it does not consider Bitcoin to be electronic money or a functional currency. Instead, the department said it considers Bitcoin as a "unit of calculation", "private money" and a "financial instrument." Since December 2013, the Federal Financial Supervision Authority has been treating Bitcoin as a unit of calculation (Rechnungseinheiten), which is a form of "private money" that can be taxed like capital. [...] The Federal Financial Supervisory Authority, unlike the Treasury Department, avoids using the term "private money" in relation to cryptocurrencies. This legal classification applies to virtually all types of virtual currencies, regardless of security software or encryption technology."⁷¹ Therefore, virtual currencies are not legal tender means, they are not foreign or any other currency, do not belong to electronic money in the understanding set out in the **Law on Supervision of Payment Services** in Germany since they are not a requirement in relation to the issuer.

Also, this Law includes the definition of electronic money and determines it like any electronic, stored money in the form of a claim against the issuer, which is issued in exchange for the payment of a sum of money to carry out payment transactions, and which are also accepted by any individual or legal entity other than the issuer. Electronic money is not monetary value.⁷² Again, this definition does not apply to cryptocurrencies, because they are not characterized by the presence of the issuer. Germany does not mention the difference between virtual currency and cryptocurrency, as well as EU law.

⁷¹Regulation of cryptocurrencies. Study of the experience of different countries, European Economic Community, 2017, 8, https://eu.docworkspace.com/d/sIL6pt_9MzPajjAY

⁷²Law on the Supervision of Payment Services (Payment Services Supervision Act - ZAG), https://www.gesetze-im-internet.de/zag_2018/BJNR244610017.html

Additionally, the question about cryptocurrency taxation in German law still remains open and not defined. Pursuant to the Federal Ministry of Finance of Germany about taxation issues of Bitcoin and other cryptocurrencies, using Bitcoins is equivalent to using ordinary means of payment, provided that they serve no other purpose than as a means of payment.⁷³

Also, from the provisions of clause 23 para. 1, No. 2 of the Law on Income Tax, it turns out that if Bitcoin has been owned for more than one year, then subsequent transactions with it (for example, sale) will not be taxed.⁷⁴ Cryptocurrencies are matter to a 25 percent capital gains tax only if the profits were made within one year after receiving the Bitcoin's. Furthermore, the simple use of virtual currency as an alternative to cash or deposit money when participating in exchange transactions does not require a special permit or license. The acquisition and disposal of cryptocurrency, both "mined" and purchased, is not point to licensing.⁷⁵

In light of the latest innovations on January 1, 2020, German law on implementing the policy change on the Fourth EU Anti-Money Laundering Directive (Gesetz zur Umsetzung der Änderungsrichtlinie zur Vierten EU-Geldwäscherichtlinie) entered into force, which defines the implementation of cryptocurrency activities as a type of financial services. Accordingly, companies wishing to provide such services need permission from the Federal Financial Supervision Authority of Germany.⁷⁶

Also, with regard to the prevention of money laundering and terrorist financing, German law already provides for a clear obligation to comply with the Law on Money Laundering (Geldwäschegesetz) by all persons engaged in cryptocurrency activities. The Federal Office for Financial Supervision of Germany explains that if institutions intend to take internal precautionary measures in the field of anti-money laundering, it is obligatory to inform the Federal Office in advance of this fact, as well as the appointment of a money laundering officer and a deputy money laundering officer.⁷⁷

Thus, the provisions of German law are quite favorable for the development of Bitcoin and much simpler and more profitable for their users. In most cases, the law does not require

⁷³Treatment of Bitcoin and other so-called virtual currencies, ECJ judgment of October 22, 2015, C-264/14, Hedqvist, Accessed 17 October 2021, <https://curia.europa.eu/juris/liste.jsf?num=C-264/14>

⁷⁴Income Tax Act (EStG), October 16, 1934, Accessed 17 October 2021, <https://www.gesetze-im-internet.de/estg/BJNR010050934.html>

⁷⁵ Regulation of cryptocurrencies. Study of the experience of different countries, European Economic Community, 2018, 9, https://eu.docworkspace.com/d/sIL6pt_9MzPajjAY

⁷⁶ Ivaniuk Viktoria, "Financial and legal regulation of cryptocurrency market in Ukraine", (dissertation, Western Ukrainian National university, 2021), 171, <https://www.wunu.edu.ua/svr/disertacia/ivanuk/dusertacia.pdf>

⁷⁷Money Laundering Act (Geldwäschegesetz) <https://www.bafin.de/SharedDocs/Veroeffentlichungen/EN/Aufsi> (cited from: Ivaniuk Viktoria, "Financial and legal regulation of cryptocurrency market in Ukraine", (dissertation, Western Ukrainian National university, 2021), 167)

taxation or permits or licenses to use Bitcoin. But, according to the latest changes, German law concentrates more on the prevention of crime using Bitcoin and cryptocurrency.

In conclusion, the EU countries were also not ready for a quick response on the regulation of cryptocurrencies, due to their technical and economic complexity, it is difficult to develop a system of rules in the absence of any practical experience. At the same time, some countries were still able to make certain amendments to existing laws so that their provisions would also apply to cryptocurrencies. Mainly, the question primarily concerns the licensing of activities with cryptocurrencies, their taxation; and also risk mitigation. Some countries are more loyal and less strict about activities with cryptocurrencies in general, some are quite negative, establishing mandatory registration requirements or imposing taxes.

2.2. Legal Regulations of Bitcoin in Other Countries

It is worth paying attention to a few European countries that are not members of the European Union. Such countries are not covered by the Directives 2018/843/EC and 2015/849/EC. Therefore, legislation of such countries will be no less important and provides an opportunity to broaden the view of the legal state of Bitcoin.

Firstly, **Switzerland**, like other European countries, does not have a clear fixation on the legislation of Bitcoin, and its regulation. However, it ranks first among the list of countries to regulate cryptocurrency as a whole. One of the most influential points is that it is practically the only state that has enshrined at the legal level the definition of virtual currencies, mentioning in its **technological feature**.

In the **Federal Council Report on virtual currencies** from June 25, 2014, there is a definition of virtual currency - ‘it is a digital representation of a value which can be traded on the Internet and although it takes on the role of money – it can be used as a means of payment for real goods and services – it is not accepted as legal tender anywhere.’⁷⁸ It also noticed that “these currencies have their own denominations. They differ from e-money in that they are not based on a currency with legal tender status. Virtual currencies exist only as a **digital code** and therefore do not have a physical counterpart, for example in the form of coins or notes. Given their trading, virtual currencies should be classified as an asset.”⁷⁹

The definition of virtual currency in the EU was already considered. However, the definition of the Swiss government is the closest to the ideal, as it indicates that virtual currency

⁷⁸Federal Council report on virtual currencies in response to the Schwaab (13.3687) and Weibel (13.4070) postulates, of June 25, 2014, 7, <https://www.news.admin.ch/NSBSubscriber/message/attachments/35355.pdf>

⁷⁹ Federal Council report on virtual currencies in response to the Schwaab (13.3687) and Weibel (13.4070) postulates, of June 25, 2014, 7, <https://www.news.admin.ch/NSBSubscriber/message/attachments/35355.pdf>

exists only in the form of digital code. This is a characteristic that shows a **technological feature** of virtual currency.

Also, the Federal Council Report on virtual currencies includes the definition of Bitcoin. “Bitcoin is a so-called cryptocurrency, whose payment system is based on a digital peer-to-peer network”.⁸⁰ The important feature which is highlighted in this report, expressed in two following sentences: “What is special about Bitcoin is that the network is organized in a decentralized manner using a mathematical algorithm [...]. The mathematical algorithm, which is based on cryptography, encrypts information in the system so that Bitcoin can be clearly identified and cannot be duplicated.”⁸¹

It is highly important to mention that this report highlighted some moments of virtual currency from a private law perspective and criminal law. For example, the subparagraph about private law said that “Under Swiss law, for instance, the use of virtual currencies as a means of payment for the purchase of goods and services or for the purchase and sale of virtual currencies in exchange for official currencies requires a mutual expression of intent by the parties, thus meeting the requirement for the conclusion of a contract under Article 1 of the Swiss Code of Obligations (CO).”⁸²

So, we can see a clear and mandatory condition for contracts which includes virtual currency. This condition is the standard for private law contracts. Such a condition in Swiss law only singled out the adoption and inclusion of cryptocurrency for a general quotation.

There is a subparagraph dedicated to criminal law which mentioned criminal aspects of the use of virtual currency. Thus, “Irrespective of whether the Federal Act on Combating Money Laundering and the Financing of Terrorism in the Financial Sector applies, a person may be subject to punishment for money laundering under Article 305bis SCC,16 such as if the person operates a trading platform for virtual currencies and thereby carries out an act that is aimed at frustrating the identification of the origin, the tracing, or the forfeiture of assets which the person knows or must assume originate from a felony. Since by definition a virtual currency constitutes property, the offense may also constitute an offense against property as set out in Articles 137 et seq. SCC, such as misappropriation, fraud, or unlawful use of financial assets.”⁸³ Therefore, Swiss law has not only established a successful definition of virtual currency but also clearly defines criminal liability for criminal acts involving cryptocurrency. This practice is not

⁸⁰ibid, 8

⁸¹ibid, 8

⁸²ibid, 10

⁸³ Paragraph 3.2. Federal Council report on virtual currencies in response to the Schwaab (13.3687) and Weibel (13.4070) postulates, of June 25, 2014, 10, <https://www.news.admin.ch/NSBSubscriber/message/attachments/35355.pdf>

widespread in national law. But, the Swiss legal framework shows by its example that any actions that contradict the law with the participation of virtual currency are under control.

This report is not a legal document. It performs only a recommendation function. But despite this, it explains virtually all issues of the use of virtual currency in different spheres of law.

Next question that rises from the Swiss law is the requirement of license for cryptocurrency use. In this situation “operations with cryptocurrencies do not require special permits, however, some activities related to cryptocurrencies, including the purchase and sale of cryptocurrencies on a commercial basis and existing trading platforms, may be subject to licensing to certain conditions. Also, the general requirements of the Swiss legislation on combating money laundering apply to operations with cryptocurrencies.”⁸⁴ It allows concluding that operations with cryptocurrency are not requiring license procedures, except only commercial activity. This provides easier access to the cryptocurrency for all regular users.

Also, cryptocurrencies in Switzerland are not subject to value-added tax, however, income tax will apply for cryptocurrencies, since cryptocurrencies are recognized as assets according to the report of the Swiss Federal Council of June 25, 2014.⁸⁵

However, there is a fact that the tax authorities in the canton of Zug will start accepting cryptocurrency to pay taxes from 2021, as a result of which Zug will become the first Swiss canton in which taxes can be paid with cryptocurrencies. Payment of taxes through cryptocurrency will be available to both legal entities and individuals in the amount of up to 100,000 Swiss francs.⁸⁶ We believe that the position of the state bodies of the canton actually testifies the possibility of cryptocurrencies to perform a dual payment function, to which the federal authorities should also pay attention.

So, it can be concluded that despite the lack of direct regulation of cryptocurrency in Swiss law, the main issues about one of the most correct definitions of virtual currency, determination of cryptocurrency in different spheres of law, the absence of special permits for some activities connected with cryptocurrency and institution of punishment for illegal use of virtual currency, make Switzerland one of the most developed countries in EU in the sphere of cryptocurrency regulation.

⁸⁴Regulation of cryptocurrencies. Study of the experience of different countries, European Economic Community, 2018, 10-11, https://eu.docworkspace.com/d/sIL6pt_9MzPajjAY

⁸⁵Mikhail Korzhanevsky, “Legal regulation of cryptocurrencies in the Republic of Belarus and foreign countries: a comparative legal study” (master's thesis, European Humanities University. Academic Department of Social Sciences, Vilnius, 2019), 77, https://eu.docworkspace.com/d/sILmpt_9M2O2jjAY

⁸⁶Canton Zug to accept cryptocurrencies for tax payment beginning in 2021, Accessed 24 November 2021. <https://www.bitcoinsuisse.com/news/canton-zug-accept-cryptocurrencies-for-tax-payment-in-2021>

Secondly, analyzing countries which located in Europe but states that are not members or are no longer members of the European Union, it is worth remembering about the **United Kingdom**. This country is also on the top of that states which are differing from others by their development in the sphere of cryptocurrency. But still, it also does not have a detailed legal basis about cryptocurrency.

“Until 2014, cryptocurrencies were not regulated and were classified as 'single-purpose vouchers', transactions with which were subject to VAT. [...] In 2014, the Tax and Customs Administration confirmed that Bitcoin is neither currency nor money, therefore cryptocurrency in no way cannot be regulated by UK laws. [...] Therefore, Bitcoin is also not subject to the UK Law on Money Laundering.”⁸⁷ As we can see in the UK until a certain period of time, Bitcoin was not regulated at all and was just a phenomenon.

In UK law, there is also a definition of electronic money. It said, “electronic money means electronically (including magnetically) stored monetary value as represented by a claim on the electronic money issuer which— (a) is issued on receipt of funds for the purpose of making payment transactions; (b) is accepted by a person other than the electronic money issuer”.⁸⁸ Again, based on this definition, Bitcoin and cryptocurrency do not belong to electronic money because it does not include issuer. Also, the Payment Services Regulations of 2009 provide a determination of cash and describe it as “banknotes and coins, bank money, and electronic money ”.⁸⁹ Thus, there is no definition and regulation of cryptocurrency on UK legal basis at the first stage of emergence and development.

In April 2016, the first UK cryptocurrency company Circle was registered. Thanks to this, Barclays Bank agreed to cooperate with it, which in fact became the **first precedent** for the collaboration of a large banking institution and a cryptocurrency company. Commenting on this situation, the Secretary of the Treasury for Economic Affairs noted that “by such actions, we confirm our decision to present the most progressive and a forward-looking regulatory regime ”. Also in April 2016, the Treasury's action plan to combat the legalization (laundering) of proceeds from crime and the financing of terrorism was published. In the document, the Treasury proposed to apply legislation in the field of legalization (laundering) of proceeds from crime in relation to exchanges and other cryptocurrency companies that exchange currencies. At the same

⁸⁷Regulation of cryptocurrencies. Study of the experience of different countries, European Economic Community, 2017, 13, https://eu.docworkspace.com/d/sIL6pt_9MzPajjAY

⁸⁸The Electronic Money Regulations 2011, Financial Service and Market, 18th January 2011, Accessed 17 October 2021, <https://www.legislation.gov.uk/uksi/2011/99/contents/made>

⁸⁹ The Payment Services Regulations 2009, Financial Service and Market, 9th February 2009, <https://www.legislation.gov.uk/uksi/2009/209/contents/made>

time, such legislation should not apply to companies that provide cryptocurrency wallets to users (but do not provide services for the exchange of digital currencies).⁹⁰

In December 2017, Bank of England Governor Mark Carney stated that he sees “fundamental problems” that will arise when central banks issue cryptocurrencies for free circulation among the population. Shortly before that, he spoke in Parliament that blockchain technology could improve the conduct of transactions between financial institutions. At the same time, he explained that if the approach is applied throughout the economy and the cryptocurrency enters free circulation among the population, there will be a threat of financial instability.⁹¹

But we consider that from January 2020, the situation has changed, because now the Financial Conduct Authority (hereinafter FCA), the financial regulator in the United Kingdom, is involved in the fight against money laundering and terrorist financing, including controlling crypto assets in the UK.

FCA continues to work with the government and the Bank of England to analyze and eliminate potential risks associated with cryptocurrency. Also, FCA encourages and develop innovation in the interests of consumers in this area. What is more, FCA provided research: on June 17, 2021, a report was released on the results of the cryptocurrency market research - "Cryptoasset consumer research 2021". It shows that the popularity of cryptocurrency has increased by 78%, i.e a larger percentage of people have heard of the existence of such a phenomenon, but the general awareness and understanding of what is a cryptocurrency has fallen. The study also noted that the Treasury consulted on the legal regulation of cryptocurrency. Such consultations were proposed to include a subgroup of cryptocurrencies in the regulatory framework when they are used as a means of payment.⁹²

So, the legal state of Bitcoin in the UK is approximately similar to most countries of the EU (which were analyzed in the previous subparagraph) in the aspect of absence of distinct law acts. Usually, it is presented in the form of official statements, reports, and the work of executive bodies, but still does not represent a codified body of law aimed at specific legal relations.

In addition, a curious example of legal regulation of Bitcoin and cryptocurrency in **Ukraine** has to be considered. In fact, the legislation of a country which is only applying and is in the process of joining the European Union, to our point of view, defines the basic legal level of cryptocurrency regulation and helps to understand what needs to be done to include

⁹⁰ Regulation of cryptocurrencies. Study of the experience of different countries, European Economic Community, 2017, 13, https://eu.docworkspace.com/d/sIL6pt_9MzPajjAY

⁹¹ Andy Bruce, “BoE's Carney sees problems with central-bank issued cryptocurrencies”, *Reuters*, December 20, 2017, <https://www.reuters.com/article/uk-britain-boe-carney-Bitcoin/boes-carney-sees-problems>

⁹² Financial Conduct Authority, “Cryptoasset consumer research 2021”. Accessed 23 November 2021, <https://www.fca.org.uk/publications/research/research-note-cryptoasset-consumer-research-2021>

cryptocurrency in the national legislation of other states. Primarily, with the ratification of the Association Agreement between Ukraine, on the one hand, and the European Union, on the other hand, Ukraine has undertaken to adapt the provisions of its legislation to the European model.

According to paragraph 10 of part 1 of Article 1 of the Law of Ukraine "On Financial Services and State Regulation of Financial Services Markets", state regulation of financial services markets is the implementation by the state of complex measures to regulate and supervise financial services markets in order to protect the rights and interests of clients of financial institutions, individuals - entrepreneurs who provide financial services, and prevent a crisis.⁹³

From the legal point of view, we can notice that Ukrainian law first and foremost ensures and guarantees fundamental human rights, which is the basis for the proper regulation of any relationship, including those related to Bitcoin.

As researchers L.M Akimov and I.P Rybak rightly determined, the functioning of any market in modern conditions is impossible to imagine without the legal framework of regulation and influence of the state. It is the state that determines and controls the legal basis of market relations, establishes the basic rules of economic relations of market participants.⁹⁴

According to Article 99 of the Constitution of Ukraine, the main function of the National Bank of Ukraine - the central bank of the state, is to ensure the stability of the currency. The currency of Ukraine is the "hryvnia."⁹⁵

Article 7 of the Law of Ukraine "On the National Bank of Ukraine" enshrines the right of the National Bank of Ukraine to monopolize the national currency of Ukraine and to organize cash circulation. In addition, Part 2 of Article 32 of the Law of Ukraine "On the National Bank of Ukraine" provides that the issuance and circulation in Ukraine of other currencies and the use of monetary surrogates as a means of payment are prohibited.⁹⁶ It is defined at the legislative level that the hryvnia is the monetary unit of Ukraine, and it is the only legal tender in Ukraine. So, taking into account the peculiarities of the nature of cryptocurrency, it is possible to determine the need to create special legislation that would regulate its application.

In the dissertation about financial and legal regulation of cryptocurrency in Ukraine, Ivaniuk Viktoria clearly identifies two stages of development of cryptocurrency in Ukraine, namely:

⁹³ "Law On Financial Services and State Regulation of Financial Services Markets", from 01 August 2021, Accessed 20 October 2021, <https://zakon.rada.gov.ua/laws/show/2664-14#Text>

⁹⁴ Akimova L. M., Rybak I. P. State regulation of financial services in Ukraine: form of control, 2014. № 2, [http://www.dridu.dp.ua/zbirnik/2014-02\(12\)/10.pdf](http://www.dridu.dp.ua/zbirnik/2014-02(12)/10.pdf)

⁹⁵ Constitution of Ukraine from 28.06.1996, Accessed 20 October 2021,

<https://zakon.rada.gov.ua/laws/show/254%D0%BA/96-%D0%B2%D1%80#n4597>

⁹⁶ About the National Bank of Ukraine: Law of Ukraine of May 20, 1999 № 679-XIV, Accessed 20 October 2021, <https://zakon.rada.gov.ua/laws/show/679-14#Text>

- 1) the stage of formation of the positions of financial regulators;
- 2) the stage of legislative activity.⁹⁷

The **first** stage included the resolving of the legal status of cryptocurrencies in Ukraine. It was the publication of the National Bank of Ukraine's Explanation on the legality of using Bitcoin "virtual currency/cryptocurrency" in Ukraine dated November 10, 2014. In this document, the National Bank of Ukraine considered virtual currency/cryptocurrency Bitcoin as a monetary surrogate that has no real value and cannot be used by individuals and legal entities in Ukraine as a means of payment, as it contradicts the norms of Ukrainian law, and notes that when using virtual currency / cryptocurrency Bitcoin is an increased risk factor associated with this service, transaction or supply channel.⁹⁸

In Ukraine, the case law on the protection of cryptocurrency rights is not very common. But we would like to focus on some separate cases. For example, the Ukrainian court recognized cryptocurrency as a virtual thing and refused judicial protection on this basis. Thus, the decision of the Darnytsya District Court of 24.03.2016 in case 753/599/16-ts, upheld by the Court of Appeal of the city of Kyiv⁹⁹, the plaintiff was denied the satisfaction of the claim about the demand from the defendant of Bitcoin as payment for the work performed. The court reasoned that the cryptocurrency belongs to the virtual-digital products and is not the subject of the material world, has no individual characteristics, its order of circulation is not regulated, and therefore it cannot be subject to judicial protection.

Another case said that the court found that the parties had a legal relationship regarding the purchase and sale of cryptocurrency. Eastern Commercial Court of Appeal by decision of 02.12.2020 in case 922/95/20¹⁰⁰ actually acknowledged the validity of the public electronic contract for the purchase of cryptocurrency and confirmed the legality of the fulfillment of obligations under it. In its decision, the court recognized the legal nature of cryptocurrency as title signs.

The third case, we would like to pay attention to, describes that the bank delayed the transfer of funds from the plaintiff's account opened on the cryptocurrency exchange to its own card account in foreign currency due to the legal uncertainty of the cryptocurrency status. The

⁹⁷Ivaniuk Viktoria, "Financial and legal regulation of cryptocurrency market in Ukraine", (dissertation, Western Ukrainian National university, 2021), 59, <https://www.wunu.edu.ua/svr/disertacia/ivanuk/dusertacia.pdf>

⁹⁸ Regarding the legality of the use of "virtual" in Ukraine currencies / cryptocurrencies "Bitcoin : clarification from 10.11.2014 / National Bank of Ukraine, Accessed 21 October 2021, <https://zakon.rada.gov.ua/laws/show/n0435500-14#Text>

⁹⁹ Darnytskyi District Court of Kyiv on March 24, 2016, Case №753/ 599/16. Reyestr.court.gov.ua, Accessed 25 November 202, <https://reyestr.court.gov.ua/Review/56686444>

¹⁰⁰ Eastern Commercial Court of Appeal by decision of 02.12.2020 in case № 922/95/20. Reyestr.court.gov.ua, Accessed 25 November 2021. <https://reyestr.court.gov.ua/Review/93327784>

plaintiff appealed to the Pechersk District Court of Kyiv with a claim to JSC CB "Privatbank" for protection of consumer rights and recovery of money in the form of a penalty for delay in the Bank's transfer. By a decision of 23 July 2020, upheld by the decision of the Kyiv Court of Appeal in case № 757/46845/19-ts¹⁰¹, the court partially upheld the said claim, fined the Bank and recognized that financial transactions could be suspended by banks only on the basis of Art. 17 of the Law of Ukraine "On Prevention and Counteraction to Legalization (Laundering) of Proceeds from Crime, Financing of Terrorism and Financing of Proliferation of Weapons of Mass Destruction". In addition, the court found that the purchase and sale of cryptocurrencies do not belong to arbitrage transactions in the FOREX market and recognized the cryptocurrency as a digital (virtual) currency and, in fact, confirmed the legality of transactions with it in the form of public electronic agreements posted on the cryptocurrency exchange website.

The last case of judicial practice inform that the cryptocurrencies in e-wallets were blocked at the request of law enforcement in Ukraine. After getting acquainted with the decision of the Odessa District Administrative Court of 24.12.2020 in case 420/7905/20¹⁰², it can be concluded that the inspectors of the cyber police department of the National Police of Ukraine understand what a cryptocurrency is and what actions should be taken in case of its theft. According to the decision, the inspector of the Department of Cybercrime in the Odessa region of the Cyberpolice Department of the National Police of Ukraine in a written request to the cryptocurrency exchange. In this request, he asked to block the withdrawal of cryptocurrency from e-wallets in connection with the theft of this cryptocurrency from other persons and there is also a reason to believe that the stolen cryptocurrency has been transferred to the appropriate e-wallets that need to be blocked. As a result of a properly drafted application, this application was satisfied by the court and the relevant electronic wallets were blocked.

Thus, in our opinion, the small case law showed the lack of an unambiguous position on the legal status of cryptocurrencies and the lack of a position of the Supreme Court in this regard. This fact does not give grounds to claim that there is a possibility of judicial protection of cryptocurrency investments in Ukraine.

We evaluate the legal status of Bitcoin in Ukraine in the early stages as the absolute unpreparedness of the state to regulate another currency, what is more virtual currency. The situation with the incorporation of cryptocurrency in United Kingdom legislation was partly similar.

¹⁰¹ Kyiv Court of Appeal on July 23, 2020 in case № 757/46845/19-ts. Reyestr. court. gov.ua. Accessed 25 November 2021. <https://reyestr.court.gov.ua/Review/95524461>

¹⁰²Odessa District Administrative Court of 24.12.2020 in case 420/7905/20. Reyestr.court.gov.ua. Accessed 25 November 2021 <https://reyestr.court.gov.ua/Review/93786356>.

Regarding the legal nature of cryptocurrencies, it is stated that the issuance of Bitcoin virtual currency does not have any collateral and legally obligated persons, it is not controlled by the state authorities of any country. Thus, Bitcoin is a monetary surrogate that does not have a guarantee of real value. The National Bank of Ukraine believes that the activity of buying and selling Bitcoin for US dollars or other foreign currency has signs of the functioning of the so-called "**financial pyramids**".

In Ukraine, the concept of the "financial pyramid" is not regulated at the legislative level. The United States Securities and Exchange Commission defines the concept of "pyramid" as a scheme in which participants try to make money only by attracting new participants.¹⁰³

In turn, researchers V.G Babenko-Levada and M.A Skirko have identified ten features that will help distinguish financial pyramids from other financial activities, such as the use of Bitcoin's:

- The organization does not have a license;
- Investors are promised high returns;
- Advertising announces that high returns are due to new high-yield investment methods;
- Investors are urged not to think long, but to invest as soon as possible;
- Payments to customers are made not from the company's profits, but from the deposits of new customers;
- Investors are not informed about possible risks;
- The contract is made in such a way that in case of collapse of the company, depositors will not receive anything;
- Hide information about the company's management and its details;
- Customers write a receipt for non-disclosure of confidential information;
- Depositors are forced to pay a registration fee, and the amount of profit depends on the number of customers brought by them personally.¹⁰⁴

Instead, the specifics of the functioning of the cryptocurrency market allows saying that it, in contrast to the financial pyramids, is characterized by:

- lack of structure of redistribution of cryptocurrencies at the expense of new participants;
- cryptocurrency market participants do not operate under the guise of commercial or non-commercial organizations;

¹⁰³ US securities and exchange commission, "Pyramid Schemes", Investor.gov, Accessed 21 October 2021, <https://www.investor.gov/introduction-investing/investing-basics/glossary/pyramid-schemes>

¹⁰⁴ Babenko-Levada V.G, Skirko M.A "Prohibition of financial pyramids as a way to stop fraud in the financial services market", *Efficient economy № 5*, (2014), https://www-economy-nayka-com-ua.translate.goog/?op=1&z=3038&_x

- there is no use of methods of psychological influence on the participants in order to increase profits;
- profitability in the cryptocurrency market is not provided at the expense of new participants;
- the international experience of the countries shows that cryptocurrency activity is subject to licensing (separate states of the United States of America, the Federal Republic of Germany, Switzerland, Estonia);¹⁰⁵

So, It lets us estimate that the opinion of the National Bank of Ukraine is wrong because the financial pyramids differ from cryptocurrency by its characteristics. Furthermore, a comparison of the characteristics of financial pyramids and cryptocurrency allows us to conclude that the activities associated with cryptocurrency is much more reliable.

Afterward, in 2014, the world's fourth Bitcoin embassy was opened in Kyiv. Embassies hold seminars, provide the necessary information, helping beginners to get used to working with Bitcoin.¹⁰⁶

At the end of November 2017, a Joint Statement of the National Bank of Ukraine, the National Commission on Securities and Stock Market and the National Commission for Regulation of Financial Services Markets on the status of cryptocurrencies in Ukraine was published.¹⁰⁷ According to statements, the complex legal nature of cryptocurrencies does not allow recognizing them either in cash, or currency and means of payment of another country, or currency value, or electronic money, or securities, or monetary surrogate.

On July 20, 2018, the Financial Stability Board supported the Concept of State Regulation of Cryptocurrency Transactions. This concept provides for the recognition of certain categories of cryptocurrencies and tokens as financial instruments, defines the role and functions of public authorities in regulating the circulation of these instruments, licensing of participants in transactions, disclosure of information. An important first step has been taken in forming a consensus of state bodies and financial regulators, which confirms the readiness to form a legislative and regulatory framework that will ensure transparency and quality of relations between investors and cryptocurrency market participants.¹⁰⁸

¹⁰⁵Ivaniuk Viktoria, “Financial and legal regulation of cryptocurrency market in Ukraine”, (dissertation, Western Ukrainian National university, 2021), 61, <https://www.wunu.edu.ua/svr/disertacia/ivanuk/dusertacia.pdf>

¹⁰⁶ Yarova K.O, “*Cryptocurrency: determining the legal status in Ukraine*” (Kiev: A young scientist, 2017. № 10 (50)), 1117-1120

¹⁰⁷National Bank of Ukraine, “ Joint statement of financial regulators on the status of cryptocurrencies in Ukraine. National Bank of Ukraine”, 30 July 2017, <https://bank.gov.ua/ua/news/all/spilna-zayava-finansovih-regulyatoriv-schodo-statusu-kriptovalyut-v-ukrayini>

¹⁰⁸Financial Stability Board, “The concept of state regulation of operations with cryptocurrencies” from 20.07.2018, <https://www.nssmc.gov.ua/wp-content/uploads/2018/10/concept-crypto.pdf>

In February-December 2018, the National Bank of Ukraine successfully implemented the “E-hryvnia” Pilot Project. E-hryvnia is the digital equivalent of cash. The National Bank considers the digital currency of the central bank as an alternative means (instrument) for making instant payments for small amounts by individuals.¹⁰⁹

It is assumed that e-hryvnia can be used, for example, to pay subsidies for utilities and other social assistance. We see this as a way to simplify control over the cash flows that are allocated from the state budget using virtual currency. We also consider this opportunity as economical, because virtual currency does not need intermediaries, banks. Therefore, such operations are performed exclusively through the online server.

On January 16, 2020, the National Bank held its Annual Meeting with the Cabinet of Ministers of Ukraine, the National Securities and Stock Market Commission, the National Commission for State Regulation of Financial Services Markets, and the Individual Deposit Guarantee Fund, during which they presented Development Strategy of financial sector of Ukraine until 2025.¹¹⁰ The purpose of the Strategy is to ensure further reform and development of the financial sector of Ukraine in accordance with leading international practices and implementation of measures provided by the Association Agreement between Ukraine and the European Union.¹¹¹

It follows that EU law plays a significant role in providing legal direction to Bitcoin in other countries. Thus, we think that EU Directives and Regulations need firstly to be improved in order to give the right direction for admission countries.

The **second** stage of development of financial and legal support of the cryptocurrency market in Ukraine - the stage of legislative activity.¹¹² At the second stage, the first attempt to regulate the cryptocurrency market can be considered as Draft Law № 7183 "On the circulation of cryptocurrencies in Ukraine" on October 6, 2017.

The bill contained only four chapters, consisting of 9 articles, which defined the concept of cryptocurrency, general principles of mining and use of cryptocurrencies. Thus, according to paragraph 1 of part 1 of Article 1, cryptocurrency is a program code (a set of symbols, numbers and letters), which is the object of ownership, which can act as a means of exchange, information

¹⁰⁹International Conference, "Digital Currencies of Central Banks: New Opportunities for Payments", National Bank of Ukraine, 21 February 2020, <https://events.bank.gov.ua/cbdc2020/>

¹¹⁰National Bank of Ukraine, "Annual meeting of the National Bank with clients and partners", 16 January 2020, <https://bank.gov.ua/ua/events/6f13Vb4pCeRs0ntM>

¹¹¹ National Commission on Stock Market and Securities, "Financial market regulators have approved the Strategy for the Development of the Financial Sector of Ukraine until 2025", 16 January 2020, <https://www.nssmc.gov.ua/rehulatory-finansovoho-ryнку-zatverdly-stratehiiu-rozvytku-finansovoho-sektoru-ukrainy-do-2025-roku/>

¹¹² Ivaniuk Viktoria, "Financial and legal regulation of cryptocurrency market in Ukraine", (dissertation, Western Ukrainian National university, 2021), 70, <https://www.wunu.edu.ua/svr/disertacia/ivanuk/dusertacia.pdf>

about which is entered and stored in the blockchain system as units of the current blockchain system in the form of data (program code).¹¹³ But on August 29, 2019, the project was revoked.

Alternative Draft of Law was issued on October 10 of 2017 № 7183-1 “On Stimulation of the Cryptocurrency Market and Their Derivatives in Ukraine”.¹¹⁴ This project contained more details that regulated cryptocurrency relations. For example, it provides the definition of cryptocurrency as a financial asset that functions as a means of exchange, preservation or unit of account. The previous law indicated cryptocurrency as an object of ownership, which can act as a means of exchange. The Law of 2017 also includes a list of cryptocurrency market participants and their responsibility; system of regulation of financial institutions in the cryptocurrency market and control over its implementation; measures to stimulate cryptocurrency mining activities and others. On August 29, 2019, the project was revoked.

On October 30, 2017, Bill № 7246 “On Amendments to the Tax Code of Ukraine (Regarding Stimulation of the Cryptocurrency Market and Their Derivatives in Ukraine)” was registered, which in fact serves as a supplement to Bill № 7183-1. The Project proposed to exempt corporate profits from taxation except of financial institutions that provide financial services in the cryptocurrency market in accordance with the Law of Ukraine "On stimulating the market of cryptocurrencies and their derivatives in Ukraine", obtained from the purchase and sale of cryptocurrencies.¹¹⁵

On September 14, 2018, the Bill № 9083 “On Amendments to the Tax Code of Ukraine on Taxation of Transactions with Virtual Assets in Ukraine” was registered. This bill contains a definition of cryptocurrency as a virtual asset in the form of a token that functions as a means of exchanging or storing value, and also mainly defines the features of taxation of transactions with virtual assets. The authors of the Bill suggest setting a five percent rate of corporate income tax applied to profits from transactions with virtual assets for the period up to and including December 31, 2024. On August 29, 2019, the Project was withdrawn.

A significant achievement in legislative activity and establishment of the legal nature of cryptocurrency was the adoption on December 6, 2019, of the Law of Ukraine № 361-IX "On prevention and counteraction to legalization (laundering) proceeds of crime, terrorist financing and the proliferation of weapons of mass destruction”, which defines cryptocurrency as a virtual

¹¹³Law on the circulation of cryptocurrency in Ukraine: the draft Law of Ukraine № 7183 from 06.10.2017, Accessed 21 October 2020, http://w1.c1.rada.gov.ua/pls/zweb2/webproc4_1?pf3511=62684

¹¹⁴Law on stimulating the cryptocurrency market and their derivatives in Ukraine: a project Law of Ukraine № 7183-1 dated 10.10.2017, Accessed 21 October 2021, http://w1.c1.rada.gov.ua/pls/zweb2/webproc4_1?pf3511=62710

¹¹⁵Draft Law of Ukraine about modification of the Tax code of Ukraine (concerning stimulation of the cryptocurrency market and their derivatives in Ukraine) № 7246 dated 30.10.2017 Accessed 21 October 2021, http://w1.c1.rada.gov.ua/pls/zweb2/webproc4_1?pf3511=62816

asset, i.e. a digital expression of value that can be traded in digital format or transferred and that can be used for payment or investment purposes.¹¹⁶

Also, a provider of services related to the circulation of virtual assets is characterized as any natural or legal person who conducts one or more of the following activities and / or operations for another natural and /or legal person.

Currently, Ukraine has its own cryptocurrency - Karbowanec. The first Ukrainian cryptocurrency launched on May 30, 2016, the announcement of the launch of the project and the start of mining was posted on the Bitcointalk forum. Powered by CryptoNote technology.¹¹⁷

Thus, we should note that the Ukrainian legislator needs, first, to determine the legal understanding of the nature of cryptocurrency in general and Bitcoin in particular, secondly, to determine the vector of movement in this situation - whether to consider cryptocurrencies as a subspecies of securities or give them an independent special status, thirdly - to ensure transparency of government agencies and officials in this sphere.

Last but not least, examples of the United States **of America** (hereinafter the USA) and **Central America (Salvador)**. The example of legal state of Bitcoin in the USA deserves separate consideration through one peculiarity, such as a **complex law regime**. It includes federal and state law. At the federal level, cryptocurrency exchanges must be registered as money transmitters with the U.S. Department of the Treasury's Financial Crimes Enforcement Network. At the state level, their activities are subject to licensing (in each state).

Referring to the Bank Secrecy Act, the U.S. Department of Treasury's Financial Crimes Enforcement Network regulates the activities of the Money Services Businesses. On March 18, 2013, the US Treasury Department's Financial Crimes Network issued an instruction to apply the provisions to those who administer, exchange, or use virtual currencies, stating that the monetary services business should be considered as:

- 1) acceptance and transfer of convertible virtual currency administrator/exchanger or
- 2) purchase or sale of a convertible virtual currency for any reason by an administrator/exchanger, if the restrictions or exemptions from the definition do not apply to a person.¹¹⁸

¹¹⁶Law on Prevention and Counteraction to Legalization (Laundering) of Proceeds from Crime, Financing of Terrorism and Financing of the Proliferation of Weapons of Mass Destruction: Draft Law of Ukraine № 2179 from 25.09.2019, Accessed 21 October 2021, http://w1.c1.rada.gov.ua/pls/zweb2/webproc4_1?pf3511=66949

¹¹⁷ Karbowanec, Wikipedia. Accessed 25 November 2021. <https://uk.wikipedia.org/wiki/%D0%9A%D0%B0%D1%80%D0%B1%>

¹¹⁸Application of FinCEN's Regulations to Persons Administering, Exchanging, or Using Virtual Currencies, March 18, 2013, Accessed 5 November 2021, <https://www.fincen.gov/resources/statutes-regulations/guidance/application-fincens-regulations-persons-administering>

It should be noted that the laws of the states on money transfers differ significantly, but they can be grouped into certain types. Most states define money transfer as involving some or all three activities: 1) money transfer; 2) issue and / or sale of payment instruments; 3) issue and/or sale of stored value.

What is more, the state of California was the first state in the United States to legally allow the use of cryptocurrency. A law that allows any corporation, association, or individual in California to participate in the circulation of money other than legal tender in the United States came into force in early 2015. However, cryptocurrency business in the state is not regulated.¹¹⁹

What is more, we should note that California currently remains the leading state in the US in terms of cryptocurrency regulation. State legislation has expanded the regulation of cryptocurrency and provided control over new actions related to cryptocurrency.

Considering the issues of money laundering and terrorist financing in the US, state remittance law applies to any entity that is either in the state or outside the state (including in a foreign jurisdiction) but does business with state residents.

When carrying out monetary services activities, such persons are obliged to conduct a comprehensive risk assessment related to money laundering and to implement an anti-money laundering program based on such an assessment of risk. The US Treasury Department's Financial Crimes Network regulations require such individuals to develop, implement, and maintain a written program designed to prevent using monetary services to facilitate money laundering and terrorist financing. Anti - program money laundering should:

- 1) include policies, procedures, and internal controls reasonably designed to ensure ongoing compliance;
- 2) appoint an official responsible for ensuring the daily implementation of programs and requirements of the Law on Banking Secrecy;
- 3) provide training for relevant personnel, which, in particular, includes training on the detection of suspicious transactions;
- 4) provide an independent review to monitor and maintain an adequate program.

Also, the United States do not allow to do business with foreign nationals who are on the Specially Designated Nationals and Blocked Entities List of the US Treasury Department's Foreign Assets Control Department.¹²⁰ The department requires all citizens of the United States to "block" (i.e. freeze) the assets of individuals and companies involved in transactions with:

¹¹⁹ Pete Rizzo, "California Governor Grants Bitcoin 'Legal Money' Status", 29 June 2014, <https://www.coindesk.com/markets/2014/06/29/california>

¹²⁰U.S Department of the Treasury, Specially Designated Nationals And Blocked Persons List (SDN) Human Readable Lists, 11 August 2021, <https://home.treasury.gov/policy-issues/financial-sanctions/specially-designated-nationals-and-blocked-persons-list-sdn-human-readable-lists>

- 1) countries subject to economic sanctions by the United States of America ("blocked countries");
- 2) certain companies and organizations that act as agents for such countries ("blocked parties");
- 3) certain persons acting as agents for such countries ("specially designated persons ").¹²¹

In addition, to get a complete picture of the legal status of Bitcoin and cryptocurrency in the United States, it is necessary to pay attention to the case law. In 2013, a judge in the District Court for the Eastern District of Texas made a decision in which he essentially recognized Bitcoin as a currency and determined financial legislation as applicable to transactions with cryptocurrencies. At the same time, Judge of the District Court for the Southern District of New York, Alison Nathan, in the court proceedings on the use and transfer of unlicensed cryptocurrency to the defendants Antonio Murgio of Coin.mx confirmed that "dictionaries, courts, and statutes of legislative history confirm that Bitcoin is money."¹²²

A Miami District Court judge, by contrast, ruled that Bitcoin is not a currency, which has led to the withdrawal of the money laundering charges. At the federal level, the Financial Crimes Network has jurisdiction over cryptocurrency regulation (other than tax matters). In March 2013, the regulator published a guide, which identified the companies to be registered as money transfer operators in the Financial Crime Network. These include companies that provide services for the translation, sale, or exchange of digital currency.

Considering tax matters, it is worth to highlight that they fall under the capacity of the US Internal Revenue Service. In March 2014, the Internal Revenue Service published a guide that defined cryptocurrency as a property that must be taxed. In December 2017, US President Donald Trump signed into law changing the country's tax code and closing a loophole that would allow tax exemptions on exchanges of one cryptocurrency to another. Before that, in order to avoid income tax, cryptocurrency investors used the so-called trades-1031 ("1031 exchanges"), moving from one cryptocurrency to another. But now everyone is obliged to pay tax for any transaction to exchange one cryptocurrency for another.¹²³

Thus, analyzing the legal state of Bitcoin in the USA it allows concluding that legal regulation of cryptocurrency in the United States needs to be completed. The country has a rich database of court cases that help to look at actions with cryptocurrency from one angle or another. However, we noted that there is no clear law at the federal level that would highlight the

¹²¹Legal Information Institute, 31 CFR Appendix A to Part 501 - Economic Sanctions Enforcement Guidelines, https://www.law.cornell.edu/cfr/text/31/appendix-A_to_part_501

¹²² Vlad Lihuta, *Legal regulation of cryptocurrency business*, (February 2017), <https://axon.partners/wp-content/uploads/2017/02/Global-Issues->

¹²³ Natalia Demchenko, "Trump signed the law on US tax reform", *RBC*, 22 December 2017, <https://www.rbc.ru/politics/22/12/2017/5a3d2c2b9a794748bfab819c>

basic provisions on cryptocurrency, such as its definition. Also, local acts in the States could be created on the basis of such a clear and general law.

Furthermore, **Salvador** is a small city in Central America that deserve the recent year special attention. In September 2021, a law came into force in Salvador to grant the cryptocurrency the status of a legal tender along with the US dollar.

For the first time in the world, Salvador has recognized Bitcoin as a legal tender. Under the law, which came into force on September 7, all businesses and organizations are required to accept cryptocurrency to pay for goods and services along with the US dollar. Previously, Salvador has no currency of its own.

At the same time, the United States has called on Salvador's authorities to ensure the "regulated, transparent and accountable" use of cryptocurrency to combat money laundering.

A lot of researchers estimate this as an experiment for the entire world community. Some of them noticed that this is an extremely unexpected and potentially very profitable experience for the country.¹²⁴

To our point of view, considering the fact that Salvador did not previously have any officially established currency, the sudden legalization and consolidation of Bitcoin is unexpected. This example deserves close observation in the future because if Bitcoin will be successfully regulated in Central America, it will serve as an example for other nations to follow.

In conclusion, countries which belong to the European Community and which are outside it have in common a real problem with a clear and distinct definition of cryptocurrency and Bitcoin, in particular, its regulation and adapting it to various areas of private law. Some countries are one step ahead of others, but it is only one step. For example, Switzerland which, at this moment, has the most correct definition of virtual currency and even Bitcoin. Also, Germany with more favourable law for the development of Bitcoin. It does not require taxation or permits or licenses to use Bitcoin.

Nevertheless, numerous aspects of operations with cryptocurrencies remained unsettled. It is established that today there is no unified interpretation of the legal nature of cryptocurrency, cryptocurrency market participants, no integrated system of basic regulatory requirements, legal methods and ways to exercise state influence on the regulation of cryptocurrency relations and the example of the first precedent of recognition of Bitcoin in Salvador seems too uncertain. Because so far no legislation has been adopted to ensure the use of cryptocurrency by its users and at least recommendations that would describe the correct ways and limits of using Bitcoin. We are confident that due to this lack of clear legal regulations, the first attempts by users to use

¹²⁴Mikhail Tetkin, "Breakthrough or PR? Why El Salvador Legalized Bitcoin ", TV channel, 5 October, <https://www.rbc.ru/crypto/news/615c70819a794782e038516f>

Bitcoin when paying for goods and services will be complicated by a number of errors. That can lead to illegal transactions and other offences.

3. REGULATORY CHALLENGES: PLAN OF BITCOIN

3.1 Bitcoin and the Future of Virtual Currency

Characteristics of the main aspects of the development of Bitcoin, as well as the identification and analysis of the legal status of Bitcoin in the EU and other countries, are of exceptional importance at the present stage of existence and the future of Bitcoin as a whole.

Because of the concept of digital payments and the existence of such a phenomenon as cryptocurrency, we currently have and will continue to develop such new areas as :

- Mobile applications and various gadgets or programs that contain virtual currency. This currency is obtained by passing levels in the game of varying difficulty. However, such a virtual currency will exist not only in games but also on any other electronic platforms. (movie platforms, TV channels, etc.);
- The great popularity of such cryptocurrency as Bitcoin is due to its simple use and lack of control by the state. Bitcoin use is already growing among some countries and will gain momentum in the future;
- New types of payment via mobile phones. At the moment, there are already new payment systems via smartphones, for example, Shopkick. Thus, the involvement of Bitcoin in the payment system via mobile phones is not so uncertain.¹²⁵

What is more, there is precognition that the average rate of capitalization of cryptocurrencies in 2023 will amount to 33%, and the savings of banks from the use of blockchain in 2022 is projected at the level of 20 billion US dollars. According to the same prevision, in 2027, 10% of the world's gross domestic product will be stored in blockchain systems. In accordance with the prevision for the development of the blockchain system, it is expected to grow by almost 10 times over the decade.

It is worth remembering that blockchain - is the basic technology for the formation of peer-to-peer payment systems and the basis for the development of cryptocurrency systems. In mid-2020, Bitcoin was the absolute leader in use and capitalization.¹²⁶ However, due to a large number of types of cryptocurrencies, in the future, it is necessary to take into account the regulation of other virtual currencies. This is due to the fact, that in 2019 the appearance of the coronavirus epidemic had an influential impact on rising of cryptocurrencies. Thus, in 2021 the other cryptocurrency known as Ethereum became more widespread and proved more resistant in

¹²⁵ Loredana Maftai, Bitcoin - between legal and informal, 55-56,
https://ceswp.uaic.ro/articles/CESWP2014_VI3_MAF.pdf

¹²⁶Larina Olga, "Prospects for the development of legal regulation of the cryptocurrency market in Russia", E-Management, № 4, (2019): 14,
<https://e-management.guu.ru/jour/article/view/71/47>

the new circumstances. This may lead to the fact that the features of this currency will need to be taken into account in the legal regulation of cryptocurrency in perspective.

Analyzing the history of the origin and development of Bitcoin cryptocurrency, as well as its legal regulation in different countries and at the level of the European Union, we can predict that Bitcoin will remain the most popular cryptocurrency in the near future. All indications determine that Bitcoin will be enshrined in law in an increasing number of countries, and may also move as the main form of digital payments for services, purchases, etc.

In turn, today, one of the main challenges for legislation is the emergence of cryptocurrencies. The importance of studying the international experience of legal regulation of cryptocurrency circulation is due to the institutional problems that arise in the development of e-commerce, the information economy, and the rapid development of Internet technologies.

It should be noted that the issue of the legal regime of cryptocurrencies is the main among legislators, central banks of developed countries, and other regulators of many countries. The rapid spread of the use of cryptocurrencies requires an urgent solution to the issue of their legal regulation by making changes to existing systems of legal regulation or the introduction of completely new special legislation in this area. This is due not only to the benefits and potential benefits of the legal consolidation of cryptocurrency transactions but also the need to prevent and respond in a timely manner to security and criminal risks.

The Fourth Global Conference on Criminal Finance and Cryptocurrencies, organized by Interpol, Europol, and the Basel Institute for Management, took place on November 18-19, 2020. It was attended by more than 2,000 representatives of law enforcement and judicial authorities, financial departments, international organizations, and the private sector from 132 countries to formulate international intersectoral solutions against the criminal use of cryptocurrencies. The main purpose of this Conference is to strengthen the knowledge, experience, and best practices of financial crime investigation and cryptocurrency intelligence in the near future. Also, it is once again emphasized and recommended in planning by States and jurisdictions to increase the exchange of tactical information and world best practices so that the experience of some countries is useful and effective for others.¹²⁷

In this context, it is important to mention that the **Financial Action Task Force on Money Laundering** in October 2018 introduced changes to its Recommendations in order to:

1. Clearly establish that they also apply to financial activities, which includes virtual assets;
2. Adding virtual asset definitions and virtual asset service providers to the dictionary;

¹²⁷ Ivaniuk Viktoria, "Financial and legal regulation of cryptocurrency market in Ukraine", (dissertation, Western Ukrainian National university, 2021), 71, <https://www.wunu.edu.ua/svr/disertacia/ivanuk/dusertacia.pdf>

3. Obtaining a license or registration of service providers from virtual assets and being subject to an effective monitoring system.¹²⁸

In addition, the **Guidance for a Risk-Based Approach to Virtual Assets** and Virtual Asset Service Providers of the Anti-Money Laundering Guidance Group adopted in 2019 sets out a requirement for countries to provide in the near future and designate one or more authorities to be responsible for licensing and/or registering assets, providers of virtual asset transfer services, and their compliance with registration and licensing rules in the relevant jurisdiction.¹²⁹

Thus, we can estimate that mentioned above measures in the form of guidance, conference and recommendations give a chance to slow but correct the legal future of virtual currency including Bitcoin in the states. Such measures will indicate and solve minor problems of the legal state of Bitcoin and cryptocurrency. Simultaneously, mobile applications and various gadgets or programs based on Bitcoin currency will appear.

3.1.1 Bitcoin and the challenge of Covid-19

One of the latest and most relevant factors that has affected Bitcoin is the coronavirus epidemic, namely the so-called COVID-19. It has become the main object of study for a number of scientists who began to discover its impact on cryptocurrency. Some scientists have studied the behaviour of cryptocurrencies during the coronavirus period to see if such cryptocurrencies would be safe and stable in such circumstances. Other researchers investigated whether the coronavirus affected the value of cryptocurrencies. For example, Conlon (2020) and Chen (2020) investigated whether Bitcoin was a careless environment for use during Covid and concluded that Bitcoin did not behave stably and instead fell in price. The opposite results were obtained as a result of a study by Mariana (2020) who determined that Bitcoin is a "safe haven" as well as Ethereum. Moreover, Ethereum was observed as a much more stable cryptocurrency during the pandemic.¹³⁰

We can only add that the existence of Bitcoin has always been characterized by instability, which manifested itself in a sharp fall in the exchange rate in 2017, and then a sudden

¹²⁸ Virtual assets and virtual asset transfer service providers, FATF, 2019, 4, https://finmonitoring.in.ua/wp-content/uploads/2019/09/virtualni_aktivy.pdf (cited from: Ivaniuk Viktoria, "Financial and legal regulation of cryptocurrency market in Ukraine", dissertation, Western Ukrainian National university, 2021, 148)

¹²⁹Ivaniuk Viktoria, "Financial and legal regulation of cryptocurrency market in Ukraine", (dissertation, Western Ukrainian National university, 2021), 71, <https://www.wunu.edu.ua/svr/disertacia/ivanuk/dusertacia.pdf>

¹³⁰Šarūnas Galgauskas, Modelling the Dynamics of Bitcoin , Ethereum, Ripple Including COVID-19 Impact (master thesis, Mykola Romeris University, 2021), 18, <file:///C:/Users/%D0%BD%D0%B0%D1%82%D0%B0%D0%BB%D1%>

double rise in the exchange rate. Currently, the cryptocurrency rate is rising or remains stable for most of the time. However, the analysis of the research's conclusions allows agreeing on the opinion that the appearance of the coronavirus negatively affected the development of Bitcoin. The instability and novelty being of Bitcoin in the development stage became painful for cryptocurrency during the epidemic. At the moment, Bitcoin has not yet taken root and did not find the trust of users. Thus, the sudden spread of the coronavirus has only worsened the situation. Such circumstances at the peak of the cryptocurrency's development led to its unstable position and again pushed it from consolidation and recognition by the law of countries.

3.2 Plan of Bitcoin: Improvement and Changes in the Legal State

Analysis of the experience of legal regulation of Bitcoin by EU countries and other countries allows to some extent to understand the gaps in the legal status of cryptocurrency in the legislation of states. What is more, understanding the principle of regulation of cryptocurrency in the countries and EU can give a clearer picture of the whole condition of Bitcoin's legal state.

From the conclusions of the previous chapter, it is clear that the legal regulation of Bitcoin faces a number of problems. We consider that the experience and practice of some countries that have achieved the highest success at this moment in Bitcoin regulation will be able to help build and improve the legal state of Bitcoin in other less developed countries.

For example, the successful experience of Germany showed that to have an institution of employees responsible for compliance with anti-money laundering legislation at the enterprise, as well as requirements for the reliability and qualification of managers of enterprises wishing to engage in cryptocurrency activities can be considered as good practice. Such innovations have not previously been observed in the legal practice of other states. Thus, it can be evaluated as a successful change in the legal state of Bitcoin and cryptocurrency as a whole.

In addition, it is efficient to introduce the obligation to obtain a permit to conduct cryptocurrency business by submitting a corresponding application with accompanying documents. Among such documents, a person should provide a detailed description of the crypto concept of a particular enterprise, including an IT description of the cryptographic functions and methods used, as well as step-by-step information on the action plan for the case of unforeseen situations and measures to be taken to avoid the loss of stored cryptocurrencies. This is a prosperous example of control and regulation of Bitcoin and cryptocurrency legal state, and its further improvement and change in legal systems of other countries.

Referring to the described above example of legal regulation of the cryptocurrency market in the United States, because of the peculiarities of the legal system of the state (the presence of both federal and state law), the American experience in regulating the

cryptocurrency market shows that in order to ensure its proper functioning, it is vital not only to determine the legal regime of Bitcoin but also to pay attention to those aspects of legal regulation that will counteract and prevent cryptocurrency offenses. So, based on this example we consider that to improve the legislation of other countries, in the context of Bitcoin regulation, there is a need of legislative consolidation of the prohibition of cryptocurrency activities with persons included in some sanctions lists. We highlight lists of the country, which consider improvement in Bitcoin regulation, list of the European Union, the United States of America, the Security Council of the Organization United Nations, Financial Action Task Force on Money Laundering.

Among the countries already analyzed, we want to draw attention to a new example of a state - **Japan**. The reason for selection of this country consists in the fact that this is the first country in the world to demonstrate a qualitatively new approach in defining the legal regime of cryptocurrencies as a means of payment.

In 2020, a number of amendments to the laws came into force in Japan - the **Law on Financial Instruments and Exchanges** and the **Law on Payment Services**. The amendments were submitted to the 198th conference of the parliament on March 15, 2019, and the law with new amendments was adopted on May 31, 2019. The most significant change is the introduction of new requirements to the work of cryptocurrency exchangers and cryptocurrency exchanges. Therefore, since cryptocurrency can be used for trading as a means of payment for goods and services, cryptocurrency exchange operators and enterprises must have a separate institution that will operate under a license to exchange virtual currencies.¹³¹

Also, to prevent money laundering and the financing of cryptocurrency-related terrorism, **Japan's Prevention of the Transfer of Criminal Proceeds Act** requires exchange providers to implement a plan "**Know Your Customer**". The provisions of the Law on the Prevention of the Transfer of Criminal Proceeds apply to registered exchange providers and require them to:

- 1) establish and record the identity of customers during certain transactions (to implement the policy "Know Your Customer");
- 2) record transactions with customers;
- 3) notify the Financial Services Agency of suspicious transactions;

¹³¹Alekseeva A., "Changes in the financial sector of Japan", Law & Trust International, Accessed 10 November 2021, <https://lawstrust.com/autor/alekseeva/izmeneniya-v-finansovom-sektore-yaponii> (cited from: Ivaniuk Viktoria, "Financial and legal regulation of cryptocurrency market in Ukraine", (dissertation, Western Ukrainian National university, 2021), 150, <https://www.wunu.edu.ua/svr/disertacia/ivanuk/dusertacia.pdf>

4) take measures to update customer due to diligence information, provide staff training and develop other measures necessary for the proper conduct of the processes provided for in paragraphs 1-3.¹³²

The provisions of the Law on Payment Services and the Law on the Prevention of the Transfer of Criminal Proceeds were mainly intended to regulate cryptocurrency exchange services, with a special focus on protecting customers and preventing money laundering and terrorist financing related to cryptocurrencies.

The Law on Payment Services also provides legal definitions of "cryptocurrency exchange services" and "cryptocurrencies". In particular, paragraph 7 of Article 2 of this Law defines exchange services as engaging in any of the following activities as a business:

- 1) sale or purchase of cryptocurrencies, or exchange of cryptocurrencies for another cryptocurrency;
- 2) intermediary, brokerage, or agency activities related to the sale or purchase of cryptocurrencies, or the exchange of cryptocurrencies for another cryptocurrency;
- 3) customer money management in relation with the activities listed in paragraphs 1 and 2; or
- 4) management of cryptocurrencies of clients for the benefit of another person.¹³³

Thus, analyzing the Japanese experience, we can identify several basic recommendations for its introduction in the legislation of other countries:

- determine the legal regime of cryptocurrencies;
- identify all risks and problems that may arise in the process of circulation cryptocurrency and form a set of measures to avoid them;
- implement the "Know Your Customer" policy in the activities of registered exchange providers;
- outline comprehensive requirements for the registration of persons wishing to provide exchange services.

Nevertheless, one of the main challenges for the current time is the rapid development of digital technologies and the inability of financial regulators in many countries to respond in a timely manner to innovation opportunities. Some more developed countries are gradually forming a favorable legal framework for new initiatives such as Bitcoin. However, the cryptocurrency market in most countries is characterized by the lack of legal regime of cryptocurrency, definition of participants in cryptocurrency relations, their legal status,

¹³² Ken Kawai, Takeshi Nagase, Huan Lee Tan, "The Virtual Currency Regulation Review", The LawReviews, Accessed 10 November, 2021, <https://thelawreviews.co.uk/title/the-virtual-currency-regulation-review/japan>

¹³³ Gaurav Arora, "Cryptoasset Regulatory Framework in Japan", paper presented at SSRN.com, November 2020, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3720230

requirements for the operation of cryptocurrency exchanges, cryptocurrency control systems, liability for cryptocurrency violations. For countries with weak regulation and the legal state of Bitcoin, a number of challenges are prepared. For example, they consist of strategic measures taken to qualitatively, effectively form and improve the system of regulations aimed at regulating legal relations in the field of Bitcoin use.

After analyzing the history of Bitcoin, the various stages of development of this cryptocurrency, its features, and elements, as well as the legal regulation of Bitcoin in the European Union, EU member states, and other countries we offer the following set of strategic measures to be carried out for the purpose of qualitative, effective formation and improvement of the system of the legal acts directed on the regulation of legal relations and the legal state of Bitcoin. Equally, these changes can also be considered as challenges for countries with weak Bitcoin regulation.

Thus, we offer the following **changes**:

- Adopt a special law on cryptocurrencies and the cryptocurrency market by the authorized legislative bodies of the state, which aims to use and regulate Bitcoin, taking into account existing international legal acts;
- Develop and approve regulations on the national commission for control over cryptocurrency transactions, licensing conditions for cryptocurrency activities by the authorized bodies of the country, which aims to provide effective and safe conditions of Bitcoin use;
- Develop and approve the Instruction on the provision of services in the sphere of cryptocurrency market;
- Develop guidelines for the investigation of offenses in the field of Bitcoin circulation;
- Negotiate and conclude international agreements on cooperation in the field of cryptocurrency market between the governments of states that have legalized Bitcoin and carry out its effective regulation.

These developments illustrate the complexity of approaches that have to formulate the reliable and effective legal basis for the regulation of Bitcoin. It is also can be estimated as a plan for each state, which aim is to solve the main problems with Bitcoin, and its legal regulation.

It is important to explain and consider in detail some of these changes. First, about the adoption of a special law on cryptocurrencies and the cryptocurrency market by the authorized legislative bodies of the state, which aims to use and regulate Bitcoin, taking into account existing international legal acts. This newly adopted law in the country, which aims to use and regulate Bitcoin, have to include these aspects:

- definition of the legal regime of Bitcoin as a means of payment;

- definition of the legal regime of cryptocurrency;
- determination of a system of state bodies authorized to exercise control in the field of the cryptocurrency market, as well as coordination of cryptocurrency relations at the international level; special training of employees of certain bodies;
- the range of Bitcoin users, their legal status;
- rules on mining (issuance) of Bitcoin ;
- definition of cryptocurrency activities, requirements for licensing the activities of cryptocurrency exchanges, requirements for the use of Bitcoin if there are any determined by local law, determine requirements for the reliability of qualifications of managing directors of legal entities wishing to carry out cryptocurrency activities;
- implementation of the "Know Your Customer" policy and other preventive measures;
- definition of an offense in the field of cryptocurrency circulation and blanket norms on liability for its commission.

In addition, some researchers highlight the importance of **principles** of state regulation of cryptocurrency. These principles mean common ideas, statements of complex building systems of state regulation of cryptocurrency. We can include such principles as:

- the principle of unity of domestic and foreign cryptocurrency policy of the state;
- the principle of combining economic and administrative methods of regulating cryptocurrency activities;
- the principle of balancing the interests of business entities, individuals and the state;
- the principle of ensuring the timely provision of reliable and complete information about cryptocurrency services, entities that provide cryptocurrency services;
- the principle of promoting educational work in order to ensure awareness of citizens, their skills, knowledge of understanding the opportunities, risks, responsibilities associated with the use of cryptocurrencies as a means of payment.¹³⁴

Also, the importance of the role in ensuring the legal and effective functioning of the cryptocurrency market played by the system of state bodies authorized to exercise control over the cryptocurrency market. Despite the innovation of Bitcoin, its nature of functioning, it is insufficient to authorize only one state body. It is necessary to provide authorization for a whole system of state bodies to exercise control in the field of the cryptocurrency market.¹³⁵

In addition, due to the fact that transactions with Bitcoin are often cross-border in nature, it would be appropriate to operate a department that will coordinate cryptocurrency

¹³⁴Ivaniuk Viktoria, "Financial and legal regulation of cryptocurrency market in Ukraine", (dissertation, Western Ukrainian National university, 2021), 71.

<https://www.wunu.edu.ua/svr/disertacia/ivanuk/dusertacia.pdf>

¹³⁵ ibid, 177

relations at the international level. The main task of this department will be to establish cooperation with institutions implementing the state cryptocurrency policy of other countries to facilitate joint training, internships, training, exchange of employees to study positive foreign experience, market regulation standards.

What is more, it is also important to highlight the creation of a special unit for the rapid detection, tracking, investigation of cryptocurrency offenses. The creation of such a unit will help to diminish the cases of cross-border offenses in the field of cryptocurrency circulation through cooperation between similar bodies that already exist in other states.

It is also worth to remind about “Know Your Customer” policy. In order to prevent money laundering and terrorist financing related to cryptocurrencies, it is necessary to establish a requirement for cryptocurrency exchanges to implement the "Know Your Customer" policy. This recommendation follows from the example of the legal regulation of cryptocurrency in Japan.

The anti-money laundering program should include:

- 1) appoint an official person responsible for ensuring the daily implementation of programs and requirements of the legislation in the field of cryptocurrency market;
- 2) provide training for relevant personnel, which, in particular, includes training on the detection of suspicious transactions;
- 3) provide an independent review to monitor and maintain an adequate program.

At the same time, in order to prevent money laundering and terrorist financing related to cryptocurrencies, it is recommended to follow US example to provide legislative consolidation of the prohibition of cryptocurrency activities with persons included in the sanctions lists of the country, list of the European Union, the United States of America, the Security Council of the Organization United Nations, Financial Action Task Force on Money Laundering. This approach will help to reduce the cases of cryptocurrency offenses in which Bitcoin is involved.

The second change said about licensing conditions for cryptocurrency activities by the authorized bodies of the country, which aims to provide effective and safe conditions of Bitcoin use. It should be noted that licensing conditions for cryptocurrency activities have to establish an exhaustive list of requirements that will be mandatory for persons wishing to carry out cryptocurrency activities, as well as a list of documents attached to the application for a license.

According to the third change about development and approval of the Instruction on the provision of services in the field of the cryptocurrency market. The Instruction should be an addition to the main law of the country about cryptocurrency and the cryptocurrency market.

In its context, it is advised to insert provisions about:

- indication of cases when one or another action is not fallen under cryptocurrency activity;
- purpose, objectives, and principles of cryptocurrency activity;

- organization of control over the provision of services in the cryptocurrency market and the division of responsibilities of state authorities in the sphere of cryptocurrency regulations;
- the description of requirements of legal persons, which would like to offer cryptocurrency services;
- indication of cases that can be a reason for annulment or suspension of licenses.

Furthermore, the fourth change said about the development of guidelines for the investigation of offenses in the field of Bitcoin circulation. These guidelines should include such provisions as:

- classification of offenses in the sphere of cryptocurrency;
- the criminal nature of offenses in the sphere of cryptocurrency;
- indication of the methodology of investigation of offenses in the sphere of cryptocurrency;
- the circumstances to be clarified in the process of investigation of offenses in the field of cryptocurrency circulation;
- principles, forms, tactics of interaction in the detection and investigation of offenses in the field of cryptocurrency circulation, the procedure for mutual exchange of information, a typical list of actions of participants in joint activities.

Fifth and the last change noticed about negotiation and conclusion of international agreements on cooperation in the part of cryptocurrency market between the governments of states that have legalized the Bitcoin and carry out its effective regulation. At the level of international agreements, it is expedient to establish permanent contacts and exchanges between states regarding experience and information on their legal bases in the field of cryptocurrency, other issues of interest to bodies authorized to control and coordinate international cooperation in cryptocurrency, and Bitcoin circulation.

We consider one of the ways to learn the best practices of cryptocurrency market regulation is coordinated international cooperation by the governments of states that have legalized the cryptocurrency market and effectively regulate Bitcoin circulation, as well as international organizations.

Mutual agreements between states will contribute to more successful regulation of the cryptocurrency market in Europe and abroad, the exchange of experience will increase the level of knowledge, skills, and abilities of employees of the system of bodies authorized to perform their functions in the market of cryptocurrency, which together will contribute to the transformation of advanced countries.

Thus, considering the above changes in the legislation of the states, we can state that they will be the basis for:

- functioning of the cryptocurrency market in the legal field, which unifies the understanding of the essence of the legal nature of cryptocurrency and Bitcoin by all subjects of settlement legal relations, public authorities, subjects management, individuals;
- harmonization of state legislation in the field of cryptocurrency market;
- balancing the interests of the state and the interests of cryptocurrency market participants;
- transformation of non-cash payments;
- timely prevention, detection and response to offenses in the field of cryptocurrency circulation, which are carried out using the latest information technologies;
- increasing the level of cryptocurrency literacy of the population.

In conclusion, due to the legal nature of Bitcoin and cryptocurrency relationships, the main problem is the impossibility of its regulation by already existing legal norms of state jurisdiction. Special characteristics of Bitcoin determine the need to create special legislation and improve existing ones. The essence of the introduction of state regulation of the cryptocurrency market is to terminate free transactions with Bitcoin and cryptocurrencies and introduce a clear procedure for their implementation.

CONCLUSIONS

1. Considering the historical length of currency and detailed analysis of main differences between Bitcoin and paper money (fiat money), the research revealed that the Bitcoin differ in the increased risk scale, as there are no liability because of absence of control and interference from the state, state bodies or the national bank. As a result, the decentralized system of Bitcoin was detected. The decentralized nature of Bitcoin forms the main challenge for states and has to be regulated by EU and state authorities in order to enhance its legal state by EU private law. According to this, the concept of cryptocurrency is directly related to the concept of Bitcoin because it is a very first decentralized cryptocurrency. Also, the process of evolution showed that Bitcoin still in the formation phase and the question of authorship remains uncertain.

2. Through analysis of the existing methods for determination of Bitcoin definition it was determined the most appropriate: Bitcoin is a decentralized digital currency, without a central bank or single administrator, that can be sent from user to user on the peer-to-peer Bitcoin network without the need for intermediaries. The absence of the official definition of Bitcoin is determined as well as fixing of Bitcoin as virtual currency by EU Directive 2018/843/EU. Based on the given definitions such characteristics were identified: easy of use, anonymity and the absence of external administration. The provided analysis of pros and cons of Bitcoin concluded the stimulation of the development of national jurisdiction from positive side and the defects concentrated on the absence of confident legal state and regulations on the negative side.

3. Based on examination of legal state of Bitcoin in the level of European Union, we determined that Case C - 264/14 has identified Bitcoin sales and purchases as non-taxable and has identified Bitcoin "as currency (means of payment), not a commodity" which proved that cryptocurrency firstly has been regulated by European law in the sphere off tax and provided assignment of it. However, the Directive 2018/843/EU has not become the main legal document that could properly ensure the legal regulation of Bitcoin. It was found that the Directive only provides a definition of virtual currency and does not include the technical components of cryptocurrency. We concluded that the Directive introduces regulation of all virtual currencies, which makes it impossible to effectively define the legal state of Bitcoin due to its decentralized nature and anonymity.

4. Regarding legal state of Bitcoin in the EU countries, the research defined that due to the lack of clear norms established by the legislation of the European Union, as well as experience from a practical point of view, the legal regulation of Bitcoin at the level of the European Union is weak, and it does not give clear legal regulation of Bitcoin in order to provide its legal state. Most countries have regulated the issues of providing licences for the use of Bitcoins (Luxembourg, Lithuania, Estonia), regulation of taxation (Danish, Finland, Germany)

and issues with risk mitigation (Lithuania). It is determined that the legal regulation of Bitcoin in Germany is the most favourable for users, as the law does not require taxation, permits or licences to use Bitcoins.

5. Through the analysis of other countries which are not the member states of the European Union, we allocated Switzerland which is the first to legislate the definition of virtual currency including its technological nature, as well as one of the few definitions of Bitcoin in the Report by the Federal Council. Based on analysis of the United Kingdom, United States and Ukraine examples of legal regulation of Bitcoin, it can be concluded that today there is no single system of requirements, methods or techniques for determining the legal nature of Bitcoin and its legal regulation. But considering the analysis of the legal regulation of Bitcoin by the United States of America, it was concluded that the experience of the US in the part of legislative consolidation of the prohibition of cryptocurrency activities with persons included in the sanctions lists is a successful addition to the national legislation of other states. Also, the example of Bitcoin legal regulation in Japan concluded the appropriate addition of determined legal regime of cryptocurrency, measures for identification of risks that may arise in the process of circulation cryptocurrency and form a set of measures to avoid them, implementation of the "Know Your Customer", securement of requirements for the registration of persons wishing to provide exchange services.

6. In our analysis it is determined that organized measures in the form of The Fourth Global Conference, Financial Action Task Force on Money Laundering, Guidance for a Risk-Based Approach to Virtual Assets and Virtual Asset Service Providers of the Anti-Money Laundering Guidance Group by EU authorities provides future legal regulation of Bitcoin in the areas of international intersectoral solutions against the criminal use of cryptocurrencies, ensure money laundering authorities to be responsible for licensing and / or registering assets and providers of virtual asset transfer services.

7. Exceptional characteristics of Bitcoin showed the prosperous forms of improvement the existing legislation and create special legislation by EU and state authorities in the forms of: determination of the legal regime of cryptocurrencies and Bitcoin, provide regulations for control over cryptocurrency transactions, create an Instruction on the provision of services in the field of cryptocurrency market and guidelines for offences detection in the area of Bitcoin circulation, encourage international agreements on cooperation in the field of cryptocurrency market between the governments of states.

RECOMMENDATIONS

1. Legislators should take into account the absence of an official definition and provide legal control over Bitcoin. It is proposed to create an official legal act or at least a recommendation at the state level. It is compulsory to include decentralized nature, anonymity, ease of use, and the absence of external administration into the definition of Bitcoin in national legislation by policymakers of each state. The recommended solution is also to ensure the instructions by state authorities for local authorities to provide control over Bitcoin circulation, with the aim to establish users' trust in cryptocurrency.

2. Due to the determination of Bitcoin sales and purchases as non-taxable and identified as a currency, not a commodity by the European Court of Justice, it is recommended to introduce court conclusions and enshrine them in the national legislation of states.

3. Because of insufficient good practice in Bitcoin regulation, we propose to establish additional measures to ensure effective Bitcoin regulation. These recommendations: identification of all risks and problems that may arise in the process of circulation cryptocurrency and approve regulations on the national commission for control over cryptocurrency transactions; licensing conditions for cryptocurrency activities by the authorized bodies of the country, which aims to provide effective and safe conditions of Bitcoin use; develop the Instruction on the provision of services in the field of cryptocurrency market; ensure guidelines for the investigation of offenses in the field of Bitcoin circulation and negotiate and conclude international agreements on cooperation in the field of cryptocurrency market between the governments of states that have legalized Bitcoin and carry out its effective regulation.

4. Due to the absence of clear legal regulation of Bitcoin for states to follow, we suggest relying on different successful legal practices in the context of the Bitcoin legal state. It is recommended to adopt a successful example of Japan to establish and record the identity of customers during certain transactions. We propose to implement the policy "Know Your Customer". Also, to follow the example of the United States of America to provide legislative consolidation of the prohibition of cryptocurrency activities with persons included in the sanctions lists of the country, which considering the improvement in Bitcoin regulation, list of the European Union, the United States of America, the Security Council of the Organization United Nations, Financial Action Task Force on Money Laundering.

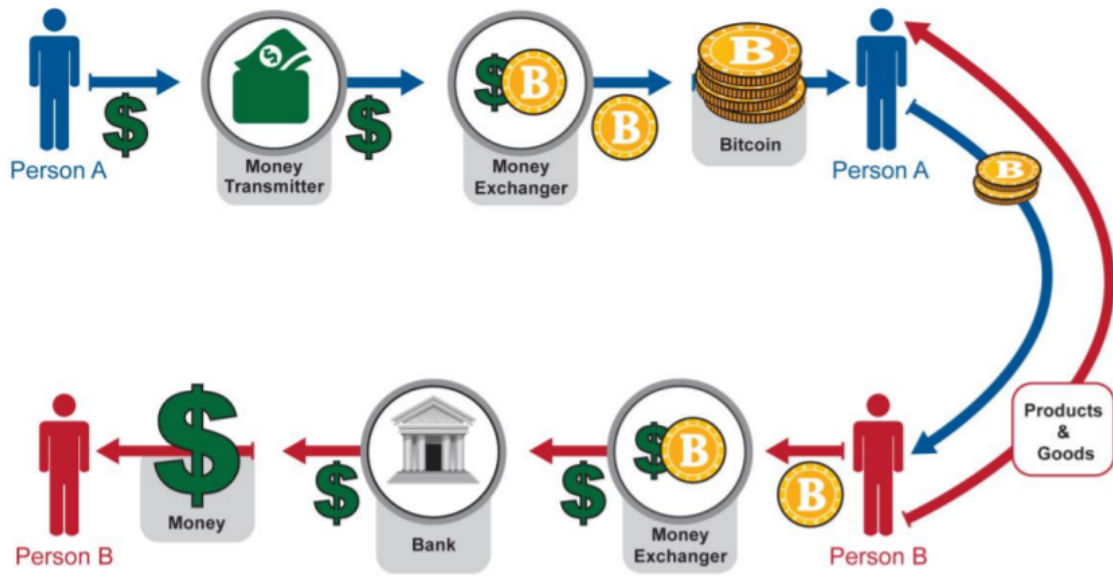
Annex 1: Comparison between Fiat money (paper money) and Bitcoin

Table 1. Comparison between paper money and Bitcoin

Specification	Fiat money (paper money)	Bitcoin
The difference		
Scale of use	universal	limited
Issuers	State institutions	Private
Issue volumes	Determined by the Central Bank	Have no worthy justification
Risks	Minimized by the state	Maximum
Terms of existence	Indefinite	While there is a growing (rush) demand ¹³⁶

¹³⁶ Maramygin M.S., Prokofieva E.N. and Markova A.A “Economic nature and problems of using virtual money (cryptocurrencies)” - Izvestia USUE, 2 (2015), 101.

Annex 2: Comparison of transaction of Bitcoin and dollar



Source: Statement of Jennifer Shasky Calvey, Director Financial Crimes Enforcement Network
United States Department of the Treasury Before the United States Senate
Committee on Homeland Security and Government Affairs (November 18, 2013), 4

Annex 3: Electronic money schemes and Virtual currency schemes

Table 2: The difference between virtual currency schemes and electronic money schemes.

	Electronic money schemes	Virtual currency schemes
<i>Money format</i>	Digital	Digital
<i>Unit of account</i>	Traditional currency (euros, US dollars, pounds, etc.) with legal tender status.	Invented currency (Bitcoin s, etc.) without legal tender status.
<i>Adoption</i>	For obligation other than the issuer	Usually in specific virtual community
<i>Legal status</i>	Regulated	Not regulated
<i>Issuer</i>	Legally established electronic money institution	Non-financial private company
<i>Money supply</i>	Fixed	Unfixed
<i>Redemption of funds</i>	Guaranteed	Not guaranteed
<i>Supervision (control)</i>	Yes	No
<i>Type of risk</i>	Usually, It is operating risks	Legal, credit, liquid and operational risks ¹³⁷

¹³⁷ European Central Bank, Virtual currency schemes – a further analysis (Frankfurt am Main: European Central Bank, February 2015), 16

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ABSTRACT

The novelty of Bitcoin and cryptocurrency, in general, has led to almost no legal regulation and the emergence of a number of challenges. Due to the complexity of Bitcoin's characteristics, not all attempts to regulate it are successful. The emergence of Bitcoin is also characterized by almost a lack of scientific work and research. Therefore, the study of the legal nature of Bitcoin is extremely relevant.

The thesis draws attention to the history of origin, definition, and the main features of the negative and positive elements of Bitcoin. The research also highlights the legal status of Bitcoin at the level of the European Union and the examples of other countries. Particular attention in this paper is paid to the future position of Bitcoin in legal regulation and the possible improvement of this cryptocurrency by the legal authorities of the states.

Keywords: bitcoin, cryptocurrency, regulation, improvements, legal state

SUMMERY

The Thesis is dedicated to “Legal State of Bitcoin: Regulatory Challenges”. The aim of the work is to determine the legal nature of Bitcoin, and its current regulation by the international union and other states, as well as its changes and improvement by legal authorities. The Thesis includes opinions on the main concept of Bitcoin, and its origination. The identification of the future of Bitcoin legal state is also considered in this research.

The Thesis consists of the general and special part. The first chapter describes the complexity of the nature of Bitcoin which includes its positive and negative elements, definitions, and features. The chapter concerns the comparison between Bitcoin and usual types of money. It is also devoted to the concept of virtual currency and its connection with Bitcoin.

The second chapter which belongs to the special part concentrates attention on the Directives, reports, opinion, and recommendations of the European Union, which try to give a designation to Bitcoin. Moreover, the European Court of Justice cases concerning the determination of Bitcoin sales and purchases as non-taxable and identified it as a currency are included. The chapter sets out the legal regulation of Bitcoin by EU, EU states and other countries, it also divides countries of EU into several groups according to their Bitcoin and cryptocurrency regulation.

The third chapter reminds about ways of existence of Bitcoin in the near future and analysis the attempt to regulate it by EU authorities. This section compares Bitcoin with other cryptocurrencies in the additional table in Annex and determine it's widespread in the future. In addition, this chapter mentions Covid-19 influence, and its role in a current legal state of Bitcoin. The example of Japan is considered an attempt to characterize the main developments in the legal state of Bitcoin. The experience of Germany and the United States are used for building changes in the legislation of other states and improving the existing one.

At the end of the Master Thesis, some notions in order to improve the current legal state of Bitcoin is provided.