Legal Nature of Cryptocurrencies in Comparative Law, Use of Them in Contracts and for Performance Purposes and Investing Cryptocurrencies in Commercial Companies as Share Capital in Turkish Law

Associate professor **Tuğçe ORAL**[1]

Abstract

Due to the advancement of technology and the lack of trust in the market and regulatory architecture by financial actors' global economy is transitioning into a digital way and cryptocurrencies are gaining importance. In this article, I begin by focusing on why cryptocurrencies are needed worldwide and tried to understand why people do not trust markets under state guarantee but prefer cryptocurrencies. Secondly, I analyzed the legal nature of cryptocurrencies in Turkish law and comparative legal systems. In particular, I will examine the legal systems of Switzerland, Germany, Japan, the Netherlands, Italy, Spain, Russia and China. Although I determined that cryptocurrencies have the nature of money in some legal systems, I deduced that they are not accepted as money in most of the legal systems and therefore cannot be subject to payments. Finally, and on the basis of the conclusion reached under the previous section, I will deal with the question whether cryptocurrencies can be used as consideration and for the purpose of performance in Turkish law by the evaluating special regulations about cryptocurrencies. In addition, I discussed whether cryptocurrencies can be invested in commercial companies as share capital.

Keywords: *cryptocurrencies, performance, investment, share capital, Turkish law.*

JEL Classification: *K12, K22*

DOI: 10.62768/TBJ/2025/15/1/09

Please cite this article as:	**Article History**
Oral, Tuğçe, 'Legal Nature of Cryptocurrencies in Comparative Law, Use of Them in Contracts and for Performance Purposes and Investing Cryptocurrencies in Commercial Companies as Share Capital in Turkish Law', *Juridical Tribune – Review of Comparative and International Law* 15, no. 1 (March 2025): 184-203.	Received: 12 October 2024 Revised: 17 December 2024 Accepted: 18 January 2025

1. Introduction

The lack of trust in the market and regulatory architecture by financial actors has led to a search for a more reliable environment and currency. The development of digital technologies and especially blockchain technology have led to new financial assets and instruments[2]. Blockchain technology has enabled many sectors, including the

[1] Tuğçe Oral - Faculty of Law, Ankara University, Turkey, ORCID No. 0000-0001-9855-2329, oraltugce@gmail.com.

[2] Andrey O. Simonov, "The Legal Nature of Crypto Assets and its Reflection in the Civil and Tax Legislation of the Russian Federation," *Law Enforcement Review* 8, no. 3 (2024): 114, https://doi.org/10.52

financial sector, to create economic value, restructure and store their economic models[3]. The most significant and apparent output of this technology is crypto currencies, which constitute an alternative to fiat money[4] and accepted as purchasable and vendable by the actors of the international trade, as they guarantee crypto-secured environment and ensure the actors' privacy and confidentiality[5]. As the crypto-currencies and the transactions that they used were developed and increased rapidly, the discussions about their legal nature, usage and controllability have been spreading both in national and international levels.

Although countries and legal systems have previously kept a distance from cryptocurrencies and postponed making legal regulations regarding them, individuals' shifting their assets to cryptocurrencies has put states at risk of reducing their tax revenues. In addition, cryptocurrencies have begun to be used extensively for money-loundering or terrorism financing purposes[6]. This situation is gradually pushing legal systems to take precautions and make regulations regarding cryptocurrencies. However, these regulations are still very insufficient and are not clear enough on many issues.

In this article, first of all, the legal nature of cryptocurrencies in different legal systems will be examined from a comparative aspect. Then, use of them as a consideration and for the purpose of performance in the contracts and the possibility of investing cryptocurrencies in commercial companies as share capital within the framework of the regulations in Turkish law will be discussed. For that aim, a qualitative approach will be used and official texts will be obtained to analyse the policies, legal regulations and predictions of some selected countries in Turkey and the world regarding cryptocurrencies. Furthermore, academic publications, blogposts, court decisions and all other accessible texts regarding cryptocurrencies will also be taken into consideration.

468/2542-1514.2024.8(3).112-121.

[3] Ayça Aktolga Öztürk, "Kripto Paraların Hukuki Statüsü, Ülkemizdeki ve Uluslararası Alandaki Önemli Yasal Düzenlemeler ile Facebook Libra Para Birimi Örneği," in *Blokzinciri, Kripto Paralar ve Akıllı Sözleşmelerde Güncel Gelişmeler*, ed. Serhat Eskiyörük and Ömer Tuğsal Doruk (Gazi Kitabevi, 2021), 1.

[4] Tina van der Linden and Tina Shirazi, "Markets in crypto-assets regulation: Does it provide legal certainty and increase adoption of crypto-assets?," *Financial Innovation* 9 no. 22 (2023): 5, https://doi.org/10.1186/s40854-022-00432-8; Koji Takahashi, "Law applicable to proprietary issues of crypto-assets," *Journal of Private International Law* 18, no. 3 (2022): 340, https://doi.org/10.1080/ 17441048.2022.2138102.

[5] Zakwan Jaroucheh and Baraq Ghaleb, "Crypto Assets Custody: Taxonomy, Components, and Open Challenges," in International conference on blockchain and Cryptocurrency (IEEE), 2023 at https://ieeexplore.ieee.org/document/10174959.

[6] Ice Ilijevski and Kire Babanoski, "Cryptocurrency Abuse for the Purposes of Money Laundering and Terrorism Financing: Policies and Practical Aspects in the European Union and North Macedonia," *European Scientific Journal* 19, no. 11 (2023): 101 ff., https://doi.org/10.19044/esipreprint.3.2023.p23. For detailed info because there should be a wider regulation on cryptocurrencies, please see Franklin R. Edwards, Kathleen Hanley, Robert Litan and Roman L. Weil, "Crypto Assets Require Better Regulation", *Financial Analysts Journal* (Second quarter 2019): 14 ff, https://doi.org/10.1080/0015198X.2019.1593766.

2. Historical background, basic characteristics and legal nature of crypto currencies

2.1. Historical background and basic characteristics of crypto-currencies

During the financial crisis in 2008, investment banks' collateralized securities unexpectedly collapsed[7] and actors within the economic system began to lose trust in state-controlled fiat money, the existing monetary system, and the financial and regulatory architecture[8].

A person or a group of persons using the pseudonym "Satoshi Nakamato", who was searching for an alternative to fiat money, published an article in 2008[9] and presented the technology of blockchain and Bitcoin -the pioneer of crypto moneys- as crypto money, which is issued by "mining" with a decentralized peer-to-peer platform for the production of digital token and secured against political or regulatory interferences[10]. The scarcity of bitcoin is algorithmically secured in order to prevent the effects of the inflationary programs that are put into force by the centralized regulatory institutions[11]. This system allows "*any two willing parties to transact directly with each other without the need for a trusted third party*"[12], which means there is no need to a middleman[13].

To have a better understanding of the history and the inducement underlying the individuals' preference of crypto currencies, firstly the concept and main characteristics of blockchain technology should be analysed. Blockchain is a technology that employs cryptography and uses complex and hard mathematical algorithms and combinations to form a continuously growing data structure that becomes a chain of "transaction blocks"[14].

The first characteristic of blockchain technology is distribution, which means that the administration of data is replicated in different places, that constitute database,

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[7] Deniz Alp İmamoğlu, *Kripto Para Birimleri ve Türk Hukukunda Düzenlenmesi* (Seçkin, 2023), 21.

[8] Chiara Zilioli, "Crypto-assets: Legal Characterisation and Challenges under Private Law," *European Law Review* 45, no. 2 (2020): 253, https://doi.org/10.2139/ssrn.3532316.

[9] Satoshi Nakamato, "Bitcoin: A Peer-to-Peer Electronic Cash System", (2008): 1-9 https://bitcoin.org/bitcoin.pdf.

[10] Chiara Zilioli, "Crypto-assets: Legal Characterisation and Challenges under Private Law," *European Law Review* 45, no. 2 (2020) 253, https://doi.org/10.2139/ssrn.3532316.

[11] Tina van der Linden and Tina Shirazi, "Markets in crypto-assets regulation: Does it provide legal certainty and increase adoption of crypto-assets?," *Financial Innovation* 9 no. 22 (2023): 4, https://doi.org/10.1186/s40854-022-00432-8; Chiara Zilioli, "Crypto-assets: Legal Characterisation and Challenges under Private Law," *European Law Review* 45, no. 2 (2020): 253, https://doi.org/10.2139/ssrn.3532316.

[12] Satoshi Nakamato, "Bitcoin: A Peer-to-Peer Electronic Cash System," (2008): 1. https://bitcoin.org/bitcoin.pdf.

[13] Pascal Witzig and Victoriya Salomon, "Cutting Out the Middleman – A Case Study of Blockchain-Induced Reconfiguraton in the Swiss Financial Services Industry," *Universite de Neuchatel, Working Paper 1 Circulation of Wealth* (2018): 5 https://www.unine.ch/files/live/sites/maps/files/shared/documents/wp/WP-1_2018_Witzig%20and%20Salomon.pdf.

[14] Robby Houben and Alexander Snyers, *Cryptocurrencies and blockchain - Legal context and implications for financial crime, money laundering and tax evasion*, (European Parliament, 2018), 15, https://op.europa.eu/en/publication-detail/-/publication/631f847c-b4aa-11e8-99ee-01aa75ed71a1.

simultaneously and is conducted by several parties[15]. This means that the entire network and every party belonging to that network has a full, identical copy of the entire data. Additions to this database are commenced by one of the parties, which creates a new "block" of data[16]. This new block is then distributed by using cryptography to every party in the network so that the transaction details cannot be reached by the actors out of this network[17]. Cryptocurrencies are issued and controlled through the usage of distributed ledger technology (DLT)[18] that allows the decentralization of the management.

The second characteristic of this system is its decentralization. A blockchain database, which can be also denominated as "register", can record the transactions made by the participants without a centralized regulatory authority. In this peer-to-peer network all the participants can reach full copy of the information[19]. This means that no single authority has full control over the assets[20].

The third characteristic of blockchain technology, namely transparency, is that this system allows all participants to reach the information found in the register[21]. Blocks can only be changed when there is a consensus of all members of the database and these changes should be shared with the entire network in real-time[22].

The fourth and last characteristic of it is immutability[23]. Immutability secures against tampering[24]. The blockchain is not utterly immutable, but as long as the miners

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[15] Gabriele Teodoro Feo, "EU Regulatory Approach on Crypto-Assets Between Specific Measures and the Review of Financial Services Regulation", (diss., University of Cumbria School of Law, 2021), 8.

[16] World Bank Group, *Distributed Ledger Technology (DLT) and blockchain*, /Fintech Note No. 1, 2017), 1, https://documents1.worldbank.org/curated/en/177911513714062215/pdf/122140-WP-PUBLIC-Distributed-Ledger-Technology-and-Blockchain-Fintech-Notes.pdf.

[17] Robby Houben and Alexander Snyers, *Cryptocurrencies and blockchain - Legal context and implications for financial crime, money laundering and tax evasion*, (European Parliament, 2018), 15, https://op.europa.eu/en/publication-detail/-/publication/631f847c-b4aa-11e8-99ee-01aa75ed71a1.

[18] Tina van der Linden and Tina Shirazi, "Markets in crypto-assets regulation: Does it provide legal certainty and increase adoption of crypto-assets?," *Financial Innovation* 9 no. 22 (2023): 2, https://doi.org/10.1186/s40854-022-00432-8. For additional info about the differences between DLT and Blockchain please see: Dmitry Kochergin, "Crypto-Assets: Economic Nature, Classification and Regulation of Turnover," *International orgazisations Research Journal* 17, no. 3 (2022): 76, https://doi.org/10.17323/ 1996-7845-2022-03-04 ; World Bank Group, *Distributed Ledger Technology (DLT) and blockchain*, /Fintech Note No. 1, 2017), 1, https://documents1.worldbank.org/curated/en/177911513714062215/pdf/122140-WP-PUBLIC-Distributed-Ledger-Technology-and-Blockchain-Fintech-Notes.pdf.

[19] Raffaele Lener, "Cryptocurrencies and crypto-assets in the Italian and EU Perspective," *Vestnik of Saint Petersburg University. Law* 1, no. 1 (2022): 219, https://doi.org/10.21638/spbu14.2022.112.

[20] Zakwan Jaroucheh and Baraq Ghaleb, "Crypto Assets Custody: Taxonomy, Components, and Open Challenges," in International conference on blockchain and Cryptocurrency (IEEE), 2023 at https://ieeexplore.ieee.org/document/10174959.

[21] Raffaele Lener, "Cryptocurrencies and crypto-assets in the Italian and EU Perspective," *Vestnik of Saint Petersburg University. Law* 1, no. 1 (2022): 219, https://doi.org/10.21638/spbu14.2022.112.

[22] World Bank Group, *Distributed Ledger Technology (DLT) and blockchain*, /Fintech Note No. 1, 2017), 1, https://documents1.worldbank.org/curated/en/177911513714062215/pdf/122140-WP-PUBLIC-Distributed-Ledger-Technology-and-Blockchain-Fintech-Notes.pdf

[23] Sherena Sheng Huang, "Crypto assets regulation in the UK: an assessment of the regulatory effectiveness and consistency," *Journal of Financial Regulation and Compliance* 29, no. 3 (2021): 338, https://doi.org/10.1108/JFRC-06-2020-0062.

[24] Gabriele Teodoro Feo, "EU Regulatory Approach on Crypto-Assets Between Specific Measures and the

allow, it is immutable[25]. Here, the term of "mining" should be dealed. Mining refers to the process of solving rather complex and hard mathematical algorithms and combinations by using very powerful computers[26]. The time frame required to produce a Bitcoin depends on the resources of the miners.

By virtue of abovementioned characteristics of blockchain, cryptocurrencies became safety zones for the actors who do not trust to the fiat moneys and centralized regulatory authorities. There are lots of cryptocurrencies at the present time, but the most famous cryptocurrencies that have millions of users and investors in markets around the world today are Bitcoin, Litecoin, Ethereum, Ripple and Dogecoin. Of these, Bitcoin was launched in 2009, Litecoin in 2011, Dogecoin in 2013, and Ethereum in 2015. Ripple represents both a payment protocol and a currency called XRP, and has also been the subject of a series of lawsuits[27]. Although there are some technical and functional similarities between the cryptocurrencies, it is not possible to say that they use exactly the same technology and financial system. In such a case, it would be meaningless to refer different currencies. The software and algorithm features of the blockchain of each cryptocurrency are different, and miners are trying to attract investors and popularize their own currencies in the market with these differences.

2.2. Legal nature of cryptocurrencies

2.2.1. Legal nature of cryptocurrencies in Turkish and Swiss law

Although the legal nature of cryptocurrencies is a highly debated issue in both Turkish law and comparative law, determining their legal nature is important in terms of clarifying which rules will be applied in legal transactions involving cryptocurrencies.

In **Turkish** law, it has been discussed in the doctrine whether cryptocurrencies can be considered as fiat money or electronic money. Money is a medium of exchange used in the payment of goods and services and issued under state authority, and its value

Review of Financial Services Regulation," (diss., University of Cumbria School of Law, 2021), 8.

[25] Andrew Verstein, "Crypto Assets and Insider Trading Law's Domain," *Iowa Law Review* 105, no. 1 (2019): 12, https://ssrn.com/abstract=3339551.

[26] Satoshi Nakamato, "Bitcoin: A Peer-to-Peer Electronic Cash System," (2008): 1-9 https://bitcoin.org/bitcoin.pdf; For the negative effects of mining activities on the environment please see Alexandre Olbrecht and Gina Pieters, "Crypto-Currencies and Crypto-Assets: An Introduction," *Easterns Economic Journal* 49, (2023): 202, https://doi.org/10.1057/s41302-023-00246-1; Hiroshi Fujiki, "Central Bank Digital Currency, crypto assets, and cash demand: evidence from Japan," *Applied Economics* 56, no. 19 (2024): 2241, https://doi.org/10.1080/00036846.2023.2186362. Bank of Russia indicated the existence of three risk factors derived from mining activities and that are negative impact of the mining on the environment, non-productive consumption of electricity and the formation of demand for the infrastructure of cryptocurrency operations. For detailed info please see Dmitry Kochergin, "Crypto-Assets: Economic Nature, Classification and Regulation of Turnover," *International orgazisations Research Journal* 17, no. 3 (2022): 103, https://doi.org/10.17323/1996-7845-2022-03-04.

[27] Robby Houben and Alexander Snyers, *Cryptocurrencies and blockchain - Legal context and implications for financial crime, money laundering and tax evasion*, (European Parliament, 2018), 35, https://op.europa.eu/en/publication-detail/-/publication/631f847c-b4aa-11e8-99ee-01aa75ed71a1.

must be internationally expressible in every country. Electronic money is regulated in Article 3, paragraph ç of Law No. 6493 on Payment and Securities Settlement Systems, Payment Services and Electronic Money Institutions as "*Monetary value issued in return for funds accepted by the electronic money issuing institution, stored electronically, used to carry out payment transactions defined in this Law and accepted as a payment instrument by real and legal persons other than the electronic money issuing institution.*" It is extremely clear that cryptocurrencies cannot be considered as money or electronic money. First of all, it is not possible to consider them as money. Because in all legal systems, for the money to be valid, it must be printed by the national central bank of the country and indicate the sovereignty of the country. However, as examined above, cryptocurrencies produced and controlled by a decentralized structure are not internationally expressible[28]; crypto currencies can only be exchanged among persons that accepts that specific cryptocurrency. In addition, it is not possible to consider cryptocurrencies as electronic money. Because electronic money can only be issued by those who are authorized to issue electronic money, there is no such authorization for cryptocurrencies. In addition, electronic money is issued in return for a fund in Turkey and is blocked in banks operating within the framework of the Banking Law No. 5411, and thus electronic money owners can withdraw the equivalent of their electronic money in cash[29]. Furthermore, cryptocurrencies cannot benefit from state guarantees like electronic money[30]. For these reasons, it is not possible to consider cryptocurrencies as electronic money[31].

The other discussion about cryptocurrencies in Türkiye is on the issue whether cryptocurrencies can be specialized as an "object". The similarities of cryptocurrencies to objects such as gold and silver have brought these discussions. First of all, they can be evaluated as a movable in terms of other branches of law, such as tax law, and can be taxed. However, coming to the issue whether they can be considered as an object in terms of civil law, there will be a big question mark. According to Turkish law, objects are things that are corporeal, limitable, suitable for establishing physical and legal dominance over, and have economic integrity. Cryptocurrencies cannot be technically considered as "objects" because they are not corporeal and users can establish physical dominance over cryptocurrencies through their wallets, but as they are not recognized by the legal system and the users cannot establish legal dominance over them[32].

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[28] Asuman Turanboy, "Kripto Paraların Ortaya Çıkmaları ve Hukukî Nitelikleri," *BATIDER* 35 no. 3 (2019): 48-49.

[29] Mehmet Sıddık Yurtçiçek, *Hukuki Açıdan Elektronik Para* (Seçkin, 2015), 274.

[30] Çiğdem Güven and Onur Irmak, "6493 Sayılı Kanunda Elektronik Para ve Elektronik Para Kuruluşlarının Tâbi Olduğu Hukuki Çerçeveve," *Bankacılar* 111, (2019): p. 30.

[31] Ahmet Aymaz, "Kripto Paraların Haczi," *Ankara Üniversitesi Hukuk Fakültesi Dergisi* 72, no. 4 (2023): 1654, https://doi.org/10.33629/auhfd.1244539; Rabia Üzümcü and Yasin Yıldırım, "Kripto Paraların Hukuki Statüleri ve Sözleşmeler İçerisindeki Yerleri," *Süleyman Demirel Üniversitesi Vizyoner Dergisi* 13, no. 33 (2022): 275, https://doi.org/10.21076/vizyoner.902422; Asuman Turanboy, "Kripto Paraların Ortaya Çıkmaları ve Hukukî Nitelikleri", *BATIDER* 35 no. 3 (2019): 49-52, EBSCOhost.

[32] Asuman Yılmaz, *Türk Sermaye Piyasası Hukuku Açısından Kripto Para Birimi Bitcoin* (Seçkin, 2023), 60; Asuman Turanboy, "Kripto Paraların Ortaya Çıkmaları ve Hukukî Nitelikleri," *BATIDER* 35 no. 3 (2019): 57.

Therefore, according to my opinion, this does not put cryptocurrencies into the status of an "object" in terms of civil law. According to the other view in Turkish law, it should be accepted that the provisions of the Turkish Civil Code regarding movable property can also be applied to cryptocurrencies by analogy to the extent that they are appropriate to their nature as there are economic needs and technological developments that law must conform[33]. However, the extension of the provisions about movable objects to cryptocurrencies will bring great legal uncertainty. On this ground, according to my opinion, cryptocurrencies can only be considered as a special type of intangible assets, for which any legal protection was not foreseen by the legislator.

This situation has also been discussed in **Switzerland**, which is the legal system closest to Turkish law in terms of private law. There is also almost a consensus in Switzerland that cryptocurrencies cannot be considered "money"[34] as according to economic theory, cryptocurrencies the broadly understood concept of money generally fulfils three main functions, it is namely a mean of payment, a unit of account and a store of value[35]. However, it is argued that the cryptocurrencies can be used to pay off debts. According to this approach, cryptocurrencies can easily be defined as a "supra-individual means of exchange" as they have the asset power and therefore, they can be an object to a monetary debt[36]. Similarly, it has been concluded that it is not possible to consider cryptocurrencies as electronic money in Switzerland[37]. As in Turkish law, there is a debate in Swiss law as to whether cryptocurrencies can be considered as goods. According to the minority view, the functionality of the concept of "good" and the realities and needs of economy allow an extension of the traditional concept of "good" to cryptocurrencies[38]. Although the authors of this view also state that a change in the Swiss Civil Code should be made regarding the legal nature of cryptocurrencies and whether they are considered as goods or not, they argue that the courts and

[33] Fatih Bilgili and M. Fatih Cengil, "Bitcoin Özelinde Kripto Paraların Ticaret Şirketlerine Sermaye Olarak Getirilmesi," *Ankara Hacı Bayram Veli Üniversitesi Hukuk Fakültesi Dergisi* 23, no. 2-3 (2019): 14, https://doi.org/10.34246/ahbvuhfd.609020; Asuman Yılmaz, *Türk Sermaye Piyasası Hukuku Açısından Kripto Para Birimi Bitcoin* (Seçkin, 2023), 61.

[34] Lukas Müller and Malik Ong, "Aktuelles zum Recht der Kryptowaehrungen," *Aktuelle Juristische Praxis* 29, no. 2, (2020): 208; Sebastian Omlor, "Kryptowaehrungen im Geldrecht," *ZHR* 183, (2019): 314; cf. Lisius Meisser, "Kryptowaehrungen: Geschichte, Funktionsweise, Potential," in *Rechtliche Herausforderungen durch webbasierte und mobile Zahlungssysteme*, ed. R. H. Weber and Florent Thouvenin (Schultess, 2015), 78.

[35] Benjamin V. Enz, *Kryptowaehrungen im Lichte des Geld- und Waehrungsrechts* (Schultess, 2019), 61-80; Lukas Müller, Milena Reutlinger and Philippe J.A. Kaiser, "Entwicklungen in der Regulierung von virtuellen Waehrungen in der Schweiz und der Europaeischen Union," *Zeitschrift für Europarecht*, (2018): 86-87; Sebastian Omlor, "Kryptowaehrungen im Geldrecht," *ZHR* 183, (2019): 303-304; David Yermack, "Is Bitcoin a Real Currency? An Economic Appraisal," in *Handbook of Digital Currency*, ed. David Lee and Chen Kuo (Acedemic Press, 2015), 32.

[36] Benjamin V. Enz, *Kryptowaehrungen im Lichte des Geld- und Waehrungsrechts* (Schultess, 2019), 83.

[37] Lukas Müller, Milena Reutlinger and Philippe J.A. Kaiser, "Entwicklungen in der Regulierung von virtuellen Waehrungen in der Schweiz und der Europaeischen Union," *Zeitschrift für Europarecht*, (2018): 94; Lukas Müller and Malik Ong, "Aktuelles zum Recht der Kryptowaehrungen," *Aktuelle Juristische Praxis* 29, no. 2, (2020): 207.

[38] Martin Eckert, "Digitale Daten als Wirtschaftsgut: digitale Daten als Sache," *Schweizerische Juristen-Zeitung* 112 (2016): 249.

administrative authorities will potentially face the need for further legal development due to the rapid increase in the real and economic importance of cryptocurrencies and the fact that such basic legislative studies take some time, and that the provisions regarding movable goods should also be applied to cryptocurrencies to the extent that they are appropriate to their qualities[39]. On the other hand, according to the majority opinion, since cryptocurrencies do not comply with the definition and qualities of goods in the Swiss Civil Code – as it is the same as the Turkish law, the definition and qualities of goods in Switzerland are not included here –, they cannot be considered as goods and the provisions regarding movables cannot be applied to cryptocurrencies[40].

There is also one more discussion about whether the crypto currencies dan be defined as capital market instrument. In fact, there were no definition of cryptocurrencies in the Codes in **Turkish** law until 26th June 2024. Only in the Regulation on the Non-Use of Crypto Assets in Payments dated 16th April 2021 issued by the Central Bank of Türkiye, crypto assets were defined as "*intangible assets that are created virtually using distributed ledger technology or similar technology, distributed through digital networks, but not classified as fiat money, book money, electronic money, a payment instrument, a security, or other capital market instruments*". Here it was emphasized that crypto assets do not fall into the category of traditional financial instruments. However, it was only an administrative regulation, not a code.

The Code on Amendments to the Capital Market Code numbered 6362, concerning crypto assets was enacted by the Turkish Grand National Assembly on 26th June 2024. This Code amendment defines crypto assets as "*intangible assets that can be created and stored electronically using distributed ledger technology or similar technology, distributed through digital networks, and can represent value or rights*." Here, the Code Amendment lays the groundwork for a broader regulatory framework for crypto assets. But still, it is impossible to define crypto currencies as a capital market instrument, fiat money, electronic money, book money or a security instrument. In the justification for the amendment to the code, it is stated that the nature of crypto assets is quite different from existing financial instruments in terms of the opportunities provided by blockchain and encryption technologies and the ability to make transfer transactions without the need for a central authority. Thus, it has become clear that crypto assets are not capital market instruments. Detailed regulations regarding the legal status of cryptocurrencies, cryptocurrency suppliers and crypto asset service providers will be made at a later date. With this regulation although it has been accepted that crypto assets may provide rights specific to capital market instruments, the principles regarding the issuance of capital market instruments as crypto assets have not yet been determined by this amendment. Here, the Turkish legislator has made a definition

[39] Benedikt Seiler and Daniel Seiler, "Sind Kryptowährungen wie Bitcoin (BTC), Ethereum (ETH) und Ripple (XRP) als Sachen im Sinne des ZGB zu behandeln?," *sui-generis* (2018): 162-163.

[40] Samuel Zogg, "Bitcoin als Rechtsobjekt – eine zivilrechtliche Rechtsordnung," *recht* (2019) 102-104; Benjamin V. Enz, *Kryptowaehrungen im Lichte des Geld- und Waehrungsrechts* (Schultess, 2019), 176-177; Lukas Müller and Malik Ong, "Aktuelles zum Recht der Kryptowaehrungen," *Aktuelle Juristische Praxis* 29, no. 2, (2020): 206.

similar to the MiCa Regulation in the European Union. Indeed, in MiCA[41], crypto assets are also defined as a digital representation of value or rights that can be transferred and stored electronically using distributed ledger technology or similar technology. However, as a result, the Turkish legislator also accepted that cryptocurrencies are a special type of intangible asset that can provide rights related to capital market instruments.

2.2.2. An analysis from a comparative aspect

Coming to the comparative law, to start with the **Japanese** law, a government decision taken in 2014 stated that cryptocurrencies cannot be considered "money" or "object"[42]. This decision is also in line with the Japanese Civil Code because, according to the law, things have two characteristics: 1. Tangible entity, 2. It should be subject to one's executive control[43]. However, in the Payment Services Code enacted in 2016, cryptocurrencies were described as a property that can be exchanged and stored in electrical environments. With this code, the Japanese government has clearly positioned cryptocurrencies within a legal framework and ensured that companies that will use or produce cryptocurrencies for commercial and professional purposes are subject to taxation processes[44].

In **German** law, crypto tokens are defined as virtual, intangible objects and therefore intangible goods in the report of the Ministry of Justice of North Rhein-Westphalia[45]. In the doctrine, according to the first view, since only the owner of the so-called "private key" - comparable to a password - has unrestricted access to a specific token, tokens are exclusive and can be controlled by one person and thus have key properties of an object within the meaning of Art. 90 BGB (German Civil Code) as long as their uniqueness is inherently guaranteed[46]. However, according to another view prevailing in German doctrine, it is stated that the goods cannot be considered as goods within the scope of Art. 90 BGB because they do not have a physical existence and only exist as digital data sets[47]. The "corporeality" required for recognition as an object

[41] For detailed info. about MiCa Regulation please see Yana Daudrikh, "The Legal Status of Crypto-Asset Issuers in the Light of the Proposed MICA Regulation," *Law in the Digital Age* 3, no. 2 (2022): 49 ff, https://doi.org/10.17323/2713-2749.2022.2.49.72.

[42] Sayuri Umeda, Regulation of Cryptocurrency: Japan, June 2018, accessed October 29, 2024 https://maint.loc.gov/law/help/cryptocurrency/japan.php

[43] Chiara Zilioli, "Crypto-assets: Legal Characterisation and Challenges under Private Law," *European Law Review* 45, no. 2 (2020): 257, https://doi.org/10.2139/ssrn.3532316.

[44] Sayuri Umeda, Regulation of Cryptocurrency: Japan, June 2018, accessed October 29, 2024 https://maint.loc.gov/law/help/cryptocurrency/japan.php

[45] Justizministerium NRW, Bericht vom 5. Oktober 2022, Gesetzgeberischer Handlungsbedarf im zivilrechtlichen Umgang mit Krypto-Token, 2022, 29. https://www.justiz.nrw.de/JM/justizpol_themen/digitaler_neustart/zt_fortsetzung_arbeitsgruppe_teil_4/2022-10-06-Bericht-Krypto-Token-final.pdf.

[46] Andreas Walter, "Bitcoin, Libra und sonstige Kryptowaehrungen aus zivilrechtlicher Sicht," *Neue Juristische Wochenschrift* (2019): 3614.

[47] Alexander Weiss, "Zivilrechtliche Grundlagenprobleme von Blockchain und Kryptowaehrungen," *Juristische Schulung*, no.11 (2019): 1054; Nils Rauer and Alexander Bibi, "Non-funginle Tokens – Was können sie wirklich?," *Zeitschrift für Urheber- und* Medienrecht, no. 1 (2022): 24; Alexander Weiss, "Die

within the meaning of Art. 90 BGB does not exist due to the lack of the possibility of physical influence. Another view defends[48] that tokens are "other rights" within the meaning of Art. 823 (1) BGB[49]. According to one view, tokens do not have the allocation and exclusion function required for recognition as "other rights". However, even if, following another view, tokens are generally granted an allocation and exclusion function, they still cannot be qualified as "other rights" within the meaning of Art. 823 BGB. In the case of tokens, an exclusion and usage function is guaranteed, if at all, primarily by the private key, i.e. purely technically. However, such a purely factual exclusion and usage function is not sufficient for recognition as an absolute legal position[50]. Therefore, under German law, although any Code confer on cryptocurrencies rights under the name of intangible assets[51], tokens can currently only be qualified as intangible assets, in the frame of "other objects" within the meaning of Art. 453 (1) BGB[52]. However, the German Federal Financial Supervisory Authority (BaFin) considers all cryptocurrencies as "unit of account" and therefore "financial instruments" and subjects them to taxation.

There were no regulations regarding cryptocurrencies in **Italian** law until 2017. After the Decree no 90 of 2017, that implements the IV. European Anti-money Laundering Directive (Directive (EU) 2015/849) Italian lawmaker defines cryptocurrencies as a "*digital representation of value, not issued by a central bank of public authority, not necessarily linked to a legal tender currency, used medium of exchange for the purchase of goods and services and electronically transferred files and negotiated.*" In a decision of Court of Brescia, the court defined cryptocurrencies as "assets", whereas the Court of Appeals saw a similarity between cryptocurrencies and "money." However, both decisions are criticized by the doctrine and at is also stated that cryptocurrencies cannot be characterized as intangible assets, since under Italian law intangible assets are subject to the *numerus clausus* principle and therefore they are categorized as financial products[53]. In fact, in a Court of Cassation decision, purchasing

Rückabwicklung einer Blockchain-Transaktion," *Neue Juristische Wochenschrift* (2022): 1343; Lisa Marleen Guntermann, "Non Fungible Token als Herausforderung für das Sachenrecht," *Recht Digital* (2022): 204; Josepf Fesenmair and Ansgar Fassbender, "Der goldene Zahlen Code – Über die Bedeutung von Non-Fungible-Token im Sport," *SpoPrax* (2021): 361.

[48] Sebastian Omlor, "Re-statt Dematerialisierung des Sachenrechts," *Recht Digital* (2021): 239.

[49] Münchener Kommentar/Wagner, 9. ed., (2024): Art. 823 Rn. 303.

[50] Maximilian Wegge, "Kryptowaehrungen, Fan-Tokens und NFTs – ein blick durch die Sportbrille," *Sport und Recht* no. 6 (2022): 356.

[51] Alexander Weiss, "Zivilrechtliche Grundlagenprobleme von Blockchain und Kryptowaehrungen," *Juristische Schulung*, no.11 (2019): 1054.

[52] Lisa Marleen Guntermann, "Non-Fungible Token als Herausforderung für das Sachenrecht," *Recht Digital* (2022): 207; Maximilian Wegge, "Kryptowaehrungen, Fan-Tokens und NFTs – ein blick durch die Sportbrille," *Sport und Recht* no. 6 (2022): 356; Dominic Deuber and Helena Khorrami Jahromi, "Lichtensteiner Blockchain-Gesetzgebung: Vorbild für Deutschland? – Lösungsansatz für eine zivilrechtliche Behandlung von Token," *Zeitschrift für IT-Recht und der Recht der Digitalisierung*, no. 9 (2020): 577.

[53] For detailed info. please see Raffaele Lener, "Cryptocurrencies and crypto-assets in the Italian and EU Perspective," *Vestnik of Saint Petersburg University. Law* 1, no. 1 (2022): 222 https://doi.org/10.21638/spbu14.2022.112.

cryptocurrencies was considered as an "investment"[54].

In **Spanish** law, cryptocurrencies were defined as "*nothing more than intangible assets*" in the Spanish Supreme Court decision dated 2019[55]. The most important and significant regulation for cryptocurrency start-ups in Spanish law is Code 10/2010 of 28 April on the Prevention of Money Laundering and Terrorist Financing. In this Code it is foreseen that service providers for the exchange of cryptocurrencies into fiat money and/or the custody of electronic wallets must be registered in the Spanish Central Bank, so that they have adequate measures to prevent money laundering and terrorist financing.

In **Dutch** Law, cryptocurrencies are characterized as "transferable values" in a decision of the district Court of Amsterdam, as they are stand-alone value files that are passed directly from the wallets of payer to payee[56].

There is no legal regulation regarding the legal status of crypto assets in **Russian** law. For this reason, the legal nature of these assets is discussed in the doctrine. There are five different opinions in the doctrine regarding their legal nature. According to the first opinion, crypto currencies are non-tangible assets that exist in electronic and digital form. Second opinion argues that they are private electronic money, which have the characterization of non-government issued funds that are issued and worked due to the peer-to-peer network. Third opinion puts forward that they are a digital expression of value that performs the functions of means of exchange, cost measures and means of accumulation. According to the fourth opinion, they are financial instruments. Due to the fifth opinion, they are only entries in the distributed registry[57]. It is defended that the lawmaker should make a regulation about cryptocurrencies as they are "flickering object" in civil law; on the other hand, it was also underlined that although their legal statuses are not recognized, especially on the area of bankruptcy these assets are seized by the judicial practice [58].

In **Chinese** law, before the 2007 amendment to the law, there was discussion on how "things" should be defined, and some jurists influenced by German law preferred the conventional civilian approach which characterises only tangible assets as "things". In contrast, the other view, which prevails and is accepted in the final draft, argues that the concept of "thing" should be expanded, since the classical approach is too rigid and resistant to social change. For this reason, cryptocurrencies are considered a "thing" under Chinese law. In fact, a court decision has reached the following conclusion: Cryptocurrencies can be classified as a "thing" under Chinese Law and

[54] Court of Cassation no. 26807 of 25 September 2020.

[55] For detailed analysis of this decision please see Chiara Zilioli, "Crypto-assets: Legal Characterisation and Challenges under Private Law," *European Law Review* 45, no. 2 (2020): 257, https://doi.org/10.2139/ssrn.3532316.

[56] For detailed info about Dutch Law please see Chiara Zilioli, "Crypto-assets: Legal Characterisation and Challenges under Private Law," *European Law Review* 45, no. 2 (2020): 257, https://doi.org/10.2139/ssrn.3532316.

[57] Andrey O. Simonov, "The Legal Nature of Crypto Assets and its Reflection in the Civil and Tax Legislation of the Russian Federation," *Law Enforcement Review* 8, no. 3 (2024): 117.

[58] Andrey O. Simonov, "The Legal Nature of Crypto Assets and its Reflection in the Civil and Tax Legislation of the Russian Federation," 119.

therefore they are entitled to legal protection[59].

3. Use of cryptocurrency as a consideration and for the purpose of performance in the contracts in Turkish law

The principle of freedom of contract applies to contracts in Turkish law. Parties have the freedom to determine their obligations and considerations as they wish, provided that they adhere to the limits set by the legislator. The most important of these limits are the imperative rules of law. Parties cannot make a contract that violates the imperative rules of law. Similarly, parties cannot make a contract that violates personality rights. When it comes to the specific issue of the article, the essential elements of some contracts in Turkish law have been determined by the legislator. For example, the essential elements of a sales contract are the "goods" subject to sale and "money". The essential elements of a labour contract are the "performance of service" and "money". On the other hand, for example, the essential elements of a contract for work are the creation of a work and renumeration. Or, except for certain exceptions, no obligation is imposed on the other party in a contract of mandate for the performance of "performing a job".

It has been emphasized above that cryptocurrencies do not have the nature of "money" in Turkish law. In this context, in my opinion, it is not possible for the parties to determine this obligation as cryptocurrency in terms of the types of contracts where "money" is foreseen as a counter-performance – as an objective essential element of a contract – in the Code. On the other hand, it is possible to determine cryptocurrencies as the performance in contracts where the counter-performance is determined as "renumeration" rather than "money" or where payment is not foreseen in "money" as an objective essential element by the lawmaker. Although cryptocurrencies do not qualify as "things", as mentioned above, they are a special type of intangible assets that is not legally protected. Therefore, according to my opinion, intangible assets can also be evaluated under "renumeration".

However, due to the increasing debate on the legal nature of cryptocurrencies and whether they can be used in payments made in daily commercial life, the Central Bank took a conservative approach and issued the Regulation on the Non-Use of Crypto Assets in Payments on 16th April 2021. According to Article 3 of this Regulation, "*Crypto assets cannot be used directly or indirectly in payments*" and "*Services cannot be provided for the direct or indirect use of crypto assets in payments*". This means that, at the present time it is impossible to make a payment with cryptocurrencies in Turkish law.

[59] For detailed info about cryptocurrencies under Chineese law please see Alvin Hoi-Chun Hung, "Evolution of Intengible Property to Crypto Assets: Legal Pragmatism in Anglo-American Common Law and Chineese Civil Law," *The Chineese Journal of Comparative Law* 12 (2024): 12, https://doi.org/10.1093/cjcl/cxae011.

4. Investing cryptocurrencies in commercial companies as share capital

Unless otherwise regulated in the law, the values that can be brought to a company as share capital are regulated in Article 127 of the Turkish Commercial Code (TCC). The *numerus clausus* principle does not apply to the values listed in this article, and these values are given as examples. According to the article, "*Unless otherwise provided in the law, the following may be brought to commercial companies as capital;*

a) Money, claims, valuable documents and shares belonging to capital companies,

b) Intellectual property rights,

c) Movable and all kinds of immovable,

d) Rights to benefit from and use movable and immovable,

e) Personal labour,

f) Commercial reputation,

g) Commercial enterprises,

h) Values such as rightfully used transferable electronic media, domains, names and signs,

i) Mining licenses and other rights with economic value,

j) Any kind of value that can be transferred and evaluated in cash."

In addition to the regulation above, no other restrictions are foreseen in the TCC for collective companies. In terms of commandite companies, the restrictions foreseen in TCC Article 307 are not related to cryptocurrencies. Therefore, theoretically, cryptocurrencies can be brought as share capital to collective and commandite companies[60].

However, it should be noted that in practice, various problems may arise when bringing cryptocurrencies not only to collective and commandite companies, but to any type of companies. Indeed, before the company is registered, the trade registry director must examine whether the necessary conditions for the establishment of the company exist. At this stage, if the cryptocurrencies were obtained from cryptocurrency platforms, there will be no problem since the keys that allow disposition on cryptocurrencies are on this platform. However, if the cryptocurrencies were obtained by transfer from over-the-counter markets or by mining and if the person who will bring the cryptocurrency to the company as capital delivers the wallet but does not share the private key, the issue of how the ownership of that money will be transferred to the company after the establishment of the company must be resolved. Indeed, although the imposition of a precautionary measure on the wallet prevents the transfer of the money to a third party, it does not guarantee that the ownership of the money will be transferred to the company after the establishment of the company[61]. For this reason, it has been asserted in the doctrine as a very accurate view that it should be mandatory to keep the

[60] Fatih Bilgili and M. Fatih Cengil, "Bitcoin Özelinde Kripto Paraların Ticaret Şirketlerine Sermaye Olarak Getirilmesi," *Ankara Hacı Bayram Veli Üniversitesi Hukuk Fakültesi Dergisi* 23, no. 2-3 (2019): 9, https://doi.org/10.34246/ahbvuhfd.609020.

[61] Çiğdem Yatağan Özkan, "Kripto Paraların Ticaret Şirketlerine Sermaye Olarak Getirilmesine İlişkin Düşünceler," *Terazi Hukuk Dergisi* 202, no. 6 (2023): 78-79.

crypto currencies that are intended to be brought to the company as main capital in accounts at the crypto exchange[62].

In addition to the article referred above, the legislator has introduced certain exceptions for joint stock and limited companies. These exceptions are regulated in Art. 342 TCC for joint stock companies and in Art. 581 TCC for limited companies. According to Art. 342 TCC, "*Elements of assets, including intellectual property rights and virtual environments, which do not have any limited real rights, seizure or cautions on them, and can be evaluated in cash and transferred, can be contributed as capital in kind. Services, personal labor, commercial reputation and undue receivables cannot be capital.*" In addition, Art. 581 TCC includes the regulation of "*Elements of assets, including intellectual property rights and virtual environments and names, which do not have any limited real rights, seizure or cautions on them, and can be evaluated in cash and transferred, can be contributed as capital in kind. Services, personal labor, commercial reputation and undue receivables cannot be capital.*"

Within the framework of the articles mentioned above, in order for cryptocurrencies to be brought as capital to joint-stock and limited companies, they must constitute an asset that can be transferred and evaluated in cash and there must not be any limited real rights, seizure or cautions on them. It has been stated above that cryptocurrencies are a special type of intangible asset, therefore they have a value. The value of cryptocurrencies can always be evaluated against the country's currency through stock exchanges. Although their values can be volatile, they meet the condition of being evaluable. In this context, cryptocurrencies have no difference from other assets having variable value.

In terms of being transferable, it is theoretically possible for cryptocurrencies to be transferred to the company. However, as in collective and commandite companies, there may be problems regarding transfer in practice. For this reason, the above-mentioned reservations regarding practice are also valid for these types of companies.

Finally, the last condition for an asset to be brought to the company as capital is that it does not have any limited real rights, seizure or cautions on it. If cryptocurrencies are acquired through a platform, it is possible that they have limited real rights, seizure or cautions. For this reason, whether they exist or not is evaluated by the trade registry director and if there are any, it is not possible to bring these values to the company as capital, otherwise it is possible.

However, it should be emphasized that, in both Turkish law and other legal systems, a detailed regulation should be made regarding the introduction of cryptocurrencies as capital to companies, taking into account the risks in practice. Otherwise, the investment opportunity that is possible in theory may cause major problems in practice.

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[62] Çiğdem Yatağan Özkan, "Kripto Paraların Ticaret Şirketlerine Sermaye Olarak Getirilmesine İlişkin Düşünceler," 80.

5. Conclusion

During the financial crisis in 2008, investment banks' collateralized securities unexpectedly collapsed and actors within the economic system began to lose trust in state-controlled fiat money, the existing monetary system, and the financial and regulatory architecture. A person or a group of persons using the pseudonym “Satoshi Nakamato”, who was searching for an alternative to fiat money, published an article in 2008 and presented the technology of blockchain and Bitcoin -the pioneer of crypto moneys- as crypto money, which is issued by “mining” with a decentralized peer-to-peer platform for the production of digital token and secured against political or regulatory interferences.

The legal nature of cryptocurrencies is a highly discussed issue in both Turkish law and comparative law. However, determining their legal nature is important in terms of clarifying which rules will be applied in legal transactions involving cryptocurrencies. In Turkish law, cryptocurrencies are a special type of intangible assets that can provide rights related to capital market instruments, but they are not one of the capital market instruments. In Japan, in the Payment Services Code enacted in 2016, cryptocurrencies were described as a “property” that can be exchanged and stored in electrical environments. Under German law, although any Code confer on cryptocurrencies rights under the name of intangible assets, tokens can currently only be qualified as intangible assets, in the frame of “other objects” within the meaning of Art. 453 (1) of German Civil Code. In Italy, although in a decision of Court of Brescia, cryptocurrencies were defined as “assets” and the Court of Appeals saw a similarity between cryptocurrencies and “money, both decisions are criticized by the doctrine and Court of Cassation considered purchasing cryptocurrencies as an "investment". In Spain, cryptocurrencies were defined as “*intangible assets*” in the Spanish Supreme Court decision dated 2019. In the Netherlands, cryptocurrencies are characterized as “transferable values” in a decision of the district Court of Amsterdam. In Russian law, it is defended that the lawmaker should make a regulation about cryptocurrencies as they are “flickering object” in civil law. In Chinese law, cryptocurrencies can be classified as a “thing” under and therefore they are entitled to legal protection under Chinese Civil Code.

For the discussion about whether it is possible to use cryptocurrency as a consideration in Turkish law, it has been emphasized above that cryptocurrencies do not have the nature of “money” in Turkish law. In this context, in my opinion, it is not possible for the parties to determine this obligation as cryptocurrency for the contracts where “money” is foreseen as an objective essential element of a contract in the Code. On the other hand, it is possible to determine cryptocurrencies as the performance in contracts where the counter-performance is determined as "renumeration" rather than "money" or where payment is not foreseen in “money” as an objective essential element by the lawmaker. Although cryptocurrencies do not qualify as “things”, as mentioned above, they are a special type of intangible assets that is not legally protected. Therefore, according to my opinion, intangible assets can also be evaluated under “renumeration”. However, at the present time it is impossible to make a payment with cryptocurrencies

in Turkish law.

As for the issue whether crypto currencies may be brought to companies as share capital, according to Art. 127 TCC, unless otherwise regulated in the law, any kind of value that can be transferred and evaluated in cash may be brought to commercial companies as capital. Therefore, theoretically, there is no disincentive for the cryptocurrencies to be brought as share capital to collective and commandite companies.

However, it should be noted that in practice, various problems may arise when bringing cryptocurrencies not only to collective and commandite companies, but to any type of companies. Indeed, before the company is registered, the trade registry director must examine whether the necessary conditions for the establishment of the company exist. At this stage, if the cryptocurrencies were obtained from cryptocurrency platforms, there will be no problem since the keys that allow disposition on cryptocurrencies are on this platform. However, if the cryptocurrencies were obtained by transfer from over-the-counter markets or by mining and if the person who will bring the cryptocurrency to the company as capital delivers the wallet but does not share the private key, the issue of how the ownership of that money will be transferred to the company after the establishment of the company must be resolved. Indeed, although the imposition of a precautionary measure on the wallet prevents the transfer of the money to a third party, it does not guarantee that the ownership of the money will be transferred to the company after the establishment of the company. For this reason, it has been asserted in the doctrine as a very accurate view that it should be mandatory to keep the crypto currencies that are intended to be brought to the company as main capital in accounts at the crypto exchange.

In addition, in order for cryptocurrencies to be brought as capital to joint-stock and limited companies, they must constitute an asset that can be transferred and evaluated in cash and there must not be any limited real rights, confiscation or cautions on them. It has been stated above that cryptocurrencies are a special type of intangible asset, therefore they have a value. The value of cryptocurrencies can always be evaluated against the country's currency through stock exchanges. Although their values can be volatile, they meet the condition of being evaluable. In this context, cryptocurrencies have no difference from other assets having variable value. In terms of being transferable, it is theoretically possible for cryptocurrencies to be transferred to the company. Finally, the last condition for an asset to be brought to the company as capital is that it does not have any limited real rights, seizure or cautions on it. If cryptocurrencies are acquired through a platform, it is possible that they have limited real rights, seizure or cautions. For this reason, whether they exist or not is evaluated by the trade registry director and if there are any, it is not possible to bring these values to the company as capital, otherwise it is possible. However, it should be emphasized that, in both Turkish law and other legal systems, a detailed regulation should be made regarding the introduction of cryptocurrencies as capital to companies, taking into account the risks in practice. Otherwise, the investment opportunity that is possible in theory may cause major problems in practice.

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