PRUDENTIAL MANAGEMENT OF BANKS' RISKS FROM CRYPTOASSETS

Zoltán NAGY[*]
Zsófia FARKAS[**]

ABSTRACT: *In recent years, there has been a significant increase of public interest in cryptocurrencies at a global level. As their use continues to grow and the crypto space expands further, so do the regulations governing cryptocurrencies around the world, which are by no means easy to keep up with. The absence of a legal framework for these decentralised and anonymous instruments could create major problems for the banking sector. The legal status of cryptocurrencies varies considerably from one state to another. In some countries there is an absolute ban, in others their use is authorised. Regarding Hungary, there is still a long way to go in terms of the regularization, as currently no banks or financial institutions recognize cryptocurrencies as regular means of payment. In June 2022 the Basel Committee of Banking Supervision has approved a standard set of final guidelines on the prudential treatment of banks' exposures to cryptoassets, which might also help this process. This study seeks to explore the risks to the banking system posed by cryptocurrency trading and whether there is any prospect of cryptocurrencies being legalised in Hungary.*

KEYWORDS: *cryptocurrency, banking sector, potential risks, Basel Committee on Banking Supervision*
JEL Code: *K19*

DOI: 10.62838/cjjc-2024-0030

1. INTRODUCTORY THOUGHTS

Cryptocurrencies and their trading have arguably become one of the most debated topics in the past years. Up until the creation of the first, and still the most prominent type of virtual money - Bitcoin - the world was not widely familiar with the concept of cryptocurrencies. Initially, it was a unique niche phenomenon, known only by a small group of enthusiasts. However, about a decade and a half ago, it suddenly revolutionized the financial market and set it on a completely new and unexpected course.

It has now been proven that cryptocurrencies have a rather volatile value, which limits their use and makes them more of a risky investment than a practical currency. Their future

[*] Full Professor, Faculty of Law, Department of Financial Law, University of Miskolc, HUNGARY.
[**] PhD Candidate, Faculty of Law, Ferenc Deák Doctoral School of Law, University of Miskolc, HUNGARY.

remains unpredictable, as the use of the underlying technology is proving to be both highly promising and problematic. They may serve as an alternative, but their use without proper regulation could easily lead to major issues such as financial instability, market manipulation or even economic crimes.[1]

The aim of my study is to shed light on the challenges the banking sector faces and to outline the most pressing problems that the decentralized and anonymous nature of cryptocurrencies poses. The most urgent issues surrounding cryptocurrencies are the emergence of widespread economic crimes and the high level of financial instability. Another concern is the avoidance of capital controls, which recently became more feasible due to the decentralized nature of Bitcoin and many other blockchain-based cryptocurrencies. Nevertheless, the sector and its investors are not adequately protected and therefore market abuses such as insider trading, unauthorised disclosure of classified information or market manipulation are relatively common.[2]

This paper seeks to elaborate on the above issues through three major units. In the first section, I explore how fundamentally different jurisdictions approach the regulation of cryptocurrencies, using the examples of China and Malta. In the second chapter, I analyse the problems of legalisation in Hungary, taking into account the position of representatives of the Hungarian banking sector and the cryptocurrency strategy of the Hungarian National Bank. Finally, in the third chapter, I review the latest recommendation of the Basel Committee on Banking Supervision, issued in June 2022. This latter from the perspective of the potential changes for Hungarian banks and whether it could lead to the legalisation of cryptocurrencies in Hungary in the near or distant future.

2. REGULATION OF CRYPTOCURRENCIES AROUND THE WORLD

There is no single universal legislative framework to the legal regulation of cryptocurrencies (Ferreria and Sandner, 2021). Most countries are reluctant to legalize this payment instrument, fearing the exposure linked to tax evasion, terrorist financing, fraud and other illegal transactions. However, as the use of cryptocurrencies continues to grow and the crypto space expands further, so do the regulations governing cryptocurrencies around the world, which are by no means easy to keep up with. The proliferation of cryptocurrencies is not yet at the stage where they could be the starting point of a financial crisis, but they are becoming an increasingly important factor on the financial market and legislators need to be mindful of financial innovation when setting regulations (Nagy, 2019).

The legal status of cryptocurrencies varies significantly from region to region, and in many countries their status is still uncertain or in transition.[3] Although in most states the

---

[1]Frankfield, J. (n.d.) Cryptocurrency Explained With Pros and Cons for Investment. *Investopedia*. Available at: https://www.investopedia.com/terms/c/cryptocurrency.asp.

[2]**Bank for International Settlements (2023)** *The crypto ecosystem: key elements and risks*. July 2023, p. 11. Available at: https://www.bis.org/publ/othp72.pdf.

[3]Assessing the Differences in Bitcoin & Other Cryptocurrency Legality Across National Jurisdictions, *Information Systems & Economics eJournal*, Social Science Research Network (SSRN). Available at: https://deliverypdf.ssrn.com/delivery.php?ID=012017103006067104114026085123079027113078029065058058030089011028004120005087103125107016062038118063096009087116099080069031029080030038029122006001023025116029071077008008096030017090015014080031114097084121087107072002004125019001004083100013125066&EXT=pdf&INDEX=TRUE.

use of cryptocurrencies is not illegal per se, their legal status and use as a means of payment is already subject to different assessments, which in turn leads to different regulations in each country.[4]

While some states have explicitly allowed the use and trade of cryptocurrencies, others have banned or restricted them. There are currently nine countries where cryptocurrency is not legally accepted, namely in China, Nepal, Afghanistan, Bangladesh, Morocco, Algeria, Egypt and Bolivia.[5]

2.1 What is behind the Chinese cryptocurrency ban?

In terms of restrictions on cryptocurrencies, the most stringent regulation has been imposed in China. The People's Bank of China argues that the ban was introduced in order to deter economic crime and prevent financial instability.[6] However, the real explanation is that cryptocurrencies have greatly facilitated the outflow of capital from the domestic market, bypassing traditional restrictions.[7] The People's Republic of China acted to avoid this by introducing said ban in September 2021, which went hand in hand with an economic policy trend, the so-called "shared prosperity" campaign.[8]

This move was not the first attempt in China to regularize cryptocurrencies. Long before that, on 5 December 2013, the People's Bank of China banned financial institutions from conducting Bitcoin transactions.[9] After less than six months, on 1 April 2014, the PBOC ordered commercial banks to freeze their Bitcoin trading accounts (Deng and Wei, 2014). The next restriction was a few years down the line: in September 2017, the state cracked down on cryptocurrency exchanges and trading platforms, resulting in 173 platforms shutting down by mid-year.[10] Meanwhile, at the beginning of 2018, the PBOC announced that the State Administration of Foreign Exchange would stop Bitcoin mining and accordingly, a number of such activities were suspended later that year.[11]

On 24 September 2021, a complete ban on cryptocurrency trading and mining came into force, thus halting all cryptocurrency-related transactions (Szczepanski, 2014).

Before the restriction, Chinese citizens could easily access foreign assets and properties through cryptocurrencies, without being subject to any control by the authorities. The decentralized nature of Bitcoin and many other blockchain-based cryptocurrencies has made capital controls easier to circumvent.[12] Capital controls have always been quite strict,

[4] Crypto Law Review (n.d.) Crypto's Biggest Legal Problems. *Medium*. Available at: https://medium.com/cryptolawreview/cryptos-big-legal-problems-63b760385fea.

[5] Money (n.d.) Cryptocurrency: Legal Status by Country. Available at: https://money.com/cryptocurrency-legal-status-by-country/.

[6] World Economic Forum (2022) What's Behind China's Cryptocurrency Ban? Available at: https://www.weforum.org/agenda/2022/01/what-s-behind-china-s-cryptocurrency-ban/.

[7] Library of Congress (2018) *Regulation of Cryptocurrency Around the World*. The Law Library of Congress, Global Legal Research Center, June 2018. Available at: https://www.loc.gov/item/2021687419/.

[8] World Economic Forum (2022) What's Behind China's Cryptocurrency Ban?

[9] Baker McKenzie (2021) China's central bank declares all cryptocurrency transactions illegal. Available at: https://blockchain.bakermckenzie.com/2021/10/04/chinas-central-bank-declares-all-cryptocurrency-transactions-illegal/.

[10] Library of Congress (2018) Regulation of Cryptocurrency: China. 12 July 2018. Available at: https://www.loc.gov/collections/publications-of-the-law-library-of-congress/about-this-collection/.

[11] Baker McKenzie (2021) China's central bank declares all cryptocurrency transactions illegal.

[12] Comply Advantage (n.d.) Cryptocurrency regulations around the world. Available at: https://complyadvantage.com/insights/cryptocurrency-regulations-around-world/.

and the Chinese authorities have been wary of capital flight. However, the effectiveness of the controls is questionable, as some sources report that capital outflows increased significantly between 2009 and 2018 despite the efforts (Szczepanski, 2014).

The "shared prosperity" campaign that accompanied the September 2021 cryptocurrency ban emphasises an inward-looking economic strategy. It is noteworthy that the ban on transactions came just a month after the announcement of the Shared Prosperity programme.[13] The ban may well have been introduced to discourage inward investment and instead encourage wealthier citizens to accept higher income taxes and to move their assets domestically. China's attempts at wealth transfer would be much harder to achieve if the wealthy were to circumvent the country's strict capital controls through offshore cryptocurrency exchanges and acquire overseas wealth.[14]

In light of the above, there is strong evidence to indicate that the cryptocurrency ban was first and foremost a response to the long-standing problem of capital flight from China. Given that there had already been massive capital outflows through cryptocurrency exchanges prior to the introduction of the ban, the People's Bank of China must have been aware that trading in cryptocurrencies could lead to a further escalation of the problem in the future.

Despite all political pressures, such a strict ban on cryptocurrency transactions will certainly be very difficult to maintain. The real question for the future is whether the control over capital flight has been successful.

2.2 Malta, a pioneer in legalizing cryptocurrencies

Malta has played a prominent role in establishing the regulatory framework for cryptosystem. In 2017, the country's Prime Minister Joseph Muscat announced the approval of a national strategy to promote Bitcoin and blockchain technology. Up to now, this Mediterranean microstate has not had any regulation specifically related to cryptocurrencies.[15]

Three bills on blockchain, ICOs (initial coin offerings) and virtual financial instrument services were enacted, changing the way cryptocurrencies are perceived and used in Malta. These were the Digital Financial Assets Act (VFAA), the Malta Digital Innovation Authority Act (MDIA) and the Innovative Technology Agreements and Services Act (ITAS).

The most important regulation on ICOs and virtual financial instrument services is the Virtual Financial Instruments Act. The primary objective of the Act is to provide adequate protection for the sector and investors, and to set requirements to prevent market abuse such as insider trading, unauthorised disclosure of classified information or market manipulation.[16] Furthermore, it imposes requirements on crypto exchange services, wallet providers, blockchain protocol controllers (in particular ICO listing platforms) and portfolio managers.

[13] Library of Congress (2018) Regulation of Cryptocurrency: China. 12 July 2018. Available at: https://www.loc.gov/collections/publications-of-the-law-library-of-congress/about-this-collection/.
[14] *Ibid.*
[15] MaltaToday (n.d.) Malta set for "revolutionary" national blockchain strategy. Available at: https://www.maltatoday.com.mt/business/tech/76459/malta_set_for_revolutionary_national_blockchain_strategy_#.WP8gSojyhPZ/.
[16] CSB Group (n.d.) 'Blockchain Malta'. Available at: https://www.csbgroup.com/fintech/blockchain-malta/.

The 2018 VFA framework is based on the EU Markets in Financial Instruments Directive and is significant in terms of regulating the authorisation requirements for VFA providers. The Markets in Crypto-Assets Regulation (MiCA)[17] is also based on the EU Directive, so the Maltese VFA framework does not differ significantly from the EU MiCA framework. Currently, the main difference between the two frameworks is the difference in minimum capital requirements. Alignment is expected to take place in the second quarter of 2023, making Malta officially the first MiCA-compliant EU Member State.[18]

The MDIA Act 2018 empowers the Malta Digital Innovation Authority to regulate and supervise the entire blockchain sector in the state. In terms of its function, this authority is the highest competent final decision-maker for cryptocurrency and blockchain activities in the country, with jurisdictional responsibility including the imposition of sanctions (Buttigieg and Efthymiopoulos, 2019).

The ITAS law aims to regulate designated innovative technology structures by classifying blockchain projects into different categories based on their specific characteristics and activities. This provision provides the backbone of the overall cryptocurrency regulation by precisely defining all concepts related to blockchain, distributed ledger technology and cryptocurrency (Buttigieg and Efthymiopoulos, 2019).

It is important to emphasise that the three Acts described above work in tandem towards a common goal. Placing the provisions in different statutes and dividing them according to their functions helps to simplify their interpretation and improve their applicability.

Overall, the legal status of cryptocurrency varies considerably from one state to another. In some countries there is an absolute ban, in others their use is authorised. Malta's adoption of a complex regulatory framework for crypto and blockchain technology is contrary to the approach of many countries. Its leading initiative will certainly serve as a benchmark for other countries in both the near and distant future.

3. THE ISSUES SURROUNDING THE LEGALISATION OF CRYPTOCURRENCIES IN HUNGARY

In the recent years, there has been a significant increase in public interest in cryptocurrencies at a global level. According to a survey, Hungary is no exception.[19] The survey reveals that more than three-quarters of Hungarian respondents have never used cryptocurrencies, but would like to know more about the long-term investment opportunities, the taxation of the resulting proceeds and the domestic and international regulations governing the trade. Those few who do trade cryptocurrencies regularly do so merely as occasional users to generate additional income. The number of those who see cryptocurrencies as a primary source of income is in decline, the research shows. Overall, there is still a long way to go for crypto regulation domestically, as there is currently no

[17]Aberdeen (n.d.) Malta becomes the first country to regulate cryptocurrency. Available at: https://www.aberdeen.com/blog-posts/blog-malta-becomes-the-first-country-to-regulate-cryptocurrency.

[18]Cointelegraph (n.d.) The state of crypto in Southern Europe: Malta leads the way. Available at: https://cointelegraph.com/news/the-state-of-crypto-in-southern-europe-malta-leads-the-way.

[19]Binance and Opinio (n.d.) A survey on cryptocurrency risks in Hungary. Available at: https://fintechzone.hu/kockazatosnak-tartjak-a-kriptovalutakat-a-magyarok/.

bank or financial institution in Hungary that considers cryptocurrencies as an official means of payment.

3.1 The Hungarian banking sector's stance on the issue

In addition to the fact that cryptocurrencies are not recognized as legal tender in Hungary, the domestic regulatory framework is very underdeveloped, as there are no laws specifically regulating crypto activities (Bujtár, 2022). However, it is important to note that Hungary has joined the European Blockchain Partnership[20] and has also adopted the Anti-Money Laundering Directive 5 of the European Parliament and of the Council.[21]

Following China's complete ban on cryptocurrency trading in September 2021, György Matolcsy stated the following: "I fully agree with the proposal and support the position of the European Union's main financial regulator that the EU should ban the mining of most new Bitcoin-like assets".[22]

The head of the central bank called on EU countries to jointly act in order to prevent the build-up of new financial pyramids and bubbles. Nevertheless, this would not mean that EU citizens would have to completely abandon these virtual currencies, as Matolcsy said that "EU citizens and companies would be allowed to own cryptocurrencies abroad, but regulators would monitor their activities".[23]

By joining the European Blockchain Partnership in 2019, Hungary became part of a cooperation to develop an EU strategy for blockchain and to build a blockchain infrastructure for public services. The Partnership encourages close cooperation between EU countries and supports interoperability and the widespread deployment of blockchain-based services. It also provides governance structures and models to support the expansion of blockchain across Europe.[24]

3.2 The cryptocurrency strategy of the Hungarian National Bank and the common future of the domestic banking system and cryptocurrencies

It can be observed that the Hungarian National Bank does not supervise trading in cryptocurrencies, and the trading of profit-sharing rights could be considered as unauthorised deposit or unauthorised collection of funds. These instruments have unpredictable prices, lack guarantee institutions to protect victims and can be used to commit crimes. There is no doubt that cryptocurrencies are risky for consumers with average financial literacy to invest in them.

Since their legal status is still unregulated, in case of frequent payment problems, misuse or theft, investors are not protected by deposit or investor protection guarantee

[20]European Commission (2020) Hungary joins European Blockchain Partnership. Available at: https://digital-strategy.ec.europa.eu/en/news/hungary-joins-european-blockchain-partnership.

[21]Council of Europe (2023) Hungary: improvements in fighting money laundering and terrorist financing have led to upgraded ratings. Available at: https://www.coe.int/en/web/portal/-/hungary-improvements-in-fighting-money-laundering-and-terrorist-financing-have-led-to-upgraded-ratings.

[22]Portfolio.hu (2022) Matolcsy György: Ideje betiltani a kriptovalutákat az EU-ban. Available at: https://www.portfolio.hu/uzlet/20220211/matolcsy-gyorgy-ideje-betiltani-a-kriptovalutakat-az-eu-ban-526273.

[23]Hungary Today (2022) Central Bank Head Matolcsy: Time to Ban Crypto Trading and Mining in the EU. Available at: https://hungarytoday.hu/central-bank-head-matolcsy-time-to-ban-crypto-trading-and-mining-in-the-eu/.

[24]European Commission (n.d.) Blockchain Partnership. Available at: https://digital-strategy.ec.europa.eu/en/policies/blockchain-partnership.

institutions. Liability and compensation rules are also lacking. It is also widely known that cryptocurrency fluctuations are very often unpredictable, driven by events unknown to the average investor, making them even more dangerous to trade with (Gábor and Kiss, 2018).

In addition, victims can only seek compensation through civil litigation or, in the case of suspected criminal offences, through criminal charges, often abroad, in a foreign jurisdiction. The Hungarian National Bank has published written warnings about the topic several times over the past years and specifically on ICOs and the suspected MLM scheme attempting to sell cryptocurrencies as well as a warning from the European Banking Authority (EBA).[25]

Despite the aforementioned, a study conducted in the summer of 2023 found that the continuous development of digital payment systems and the proliferation of cryptocurrencies are creating more and more opportunities for everyday purchases in Hungary as well. This means that nearly a hundred places already offer the possibility to pay with cryptocurrencies, including cafés, taxis, apiaries and foundations.[26] No wonder that it is gaining so much popularity, as the adoption is simple and involves minimal costs for businesses. This phenomenon indicates that we are very likely to expect further growth in the future, the remaining question is how domestic regulation will respond to this occurrence.

4. THE BASEL COMMITTEE ON BANKING SUPERVISION'S SECOND CONSULTATION ON THE PRUDENTIAL TREATMENT OF BANKS' EXPOSURES TO CRYPTOASSETS

In June 2022, the supervisory body of the Basel Committee on Banking Supervision approved a standard set of final guidelines on the prudential treatment of banks' exposures to crypto-assets. The Commission agreed to implement the guidelines by 1 January 2025, so that the text of the standard will be incorporated into the consolidated Basel framework in the foreseeable future. [27]

The crypto-asset market has experienced a very dynamic expansion over the past few years and, although the crypto-asset market remains small compared to the size of the global financial system, it has continued to grow since the publication of the Commission's first consultation paper.[28] The Commission sees the proliferation of cryptoassets and related services as a source of concern for financial stability and as a potential threat to banks. The high volatility of certain crypto-assets and the increase in exposures could pose risks to banks, whether they be liquidity risk, credit risk, market risk, operational risk (including fraud and cyber risk) or money laundering/terrorist financing risk.

[25] Magyar Nemzeti Bank (2020) Kriptovaluta, nyereségrészesedési jog: fokozott befektetői kockázatok. Available at: https://www.mnb.hu/sajtoszoba/sajtokozlemenyek/2020-evi-sajtokozlemenyek/kriptovaluta-nyeresegreszes edesi -jog-fokozott-befektetoi-kockazatok.

[26] Világgazdaság (2023) Csaknem száz helyen lehet Magyarországon kriptovalutával fizetni. Available at: https://www.vg.hu/vilaggazdasag-magyar-gazdasag/2023/07/csaknem-szaz-helyen-lehet-magyarorszagon-kriptovalutaval-fizetni.

[27] Basel Committee on Banking Supervision: Consultative Document, Second consultation on the prudential treatment of cryptoasset exposures, Issued for comment by 30 September 2022, June 2022. Available at: https://www.bis.org/bcbs/publ/d533.pdf.

[28] Basel Committee on Banking Supervision (2022) *Prudential treatment of cryptoasset exposures*. Available at: https://www.bis.org/bcbs/publ/d545.pdf.

The Crypto Standard represents a new chapter in the Basel Committee's framework for prudential regulation of banks. It consists of more than 130 sections and addresses the application of most types of prudential requirements to cryptoassets. This standard follows largely the June 2021 proposal, which was amended in June 2022 during the finalisation process.[29]

The BCBS has now passed the baton to its members to turn the new standards into law. It is up to each regulator to determine how they intend to put this into practice. Hungary must also incorporate the content of the second consultation into its national legislation by 1 January 2025, so there is a high chance that this process will bring substantial changes to the legalisation of cryptocurrencies in Hungary.

5. CONCLUDING REMARKS

As cryptocurrencies are rapidly going mainstream, law enforcement authorities, tax authorities and legal regulators around the world are trying to understand the concept of cryptocurrencies and where exactly they fit into existing regulations and legal frameworks. The decentralized and anonymous nature of cryptocurrencies has also attracted a variety of illegal activities. Authorities worldwide are concerned about the use of cryptocurrencies for money laundering, terrorist financing and tax evasion. The situation is no different in Hungary, the same risks and concerns arise when it comes to trading crypto assets. Hungary is somewhere in the middle of the spectrum, as the country neither completely shuts out cryptocurrencies, following the example of China, nor does it currently provide a regulatory framework as advanced as that of Malta, which is a pioneer in this area.

The question is whether there is any perspective that a process leading to the legalisation of cryptocurrencies will be initiated in Hungary, given the examples from abroad, and complemented by the second consultation of the Basel Committee on Banking Supervision. The answer stems, among other things, from the fact that cryptocurrencies remain in their infancy, and legislators unfamiliar with the technology have not yet recognised their potential. In the absence of such awareness, it is also difficult to adopt or even propose legislation in this area. Lawmakers lack such technical insight, so I believe that in light of this, economists, regulators and others need to come up with proposals and these actors must work together to create a successful regulatory framework.

I am convinced that Hungary is definitely moving towards a more advanced regulatory approach regarding the trading of cryptocurrencies, however, I also believe that this will be the result of a prolonged process. In the recent years, businesses accepting cryptocurrencies as a means of payment have slowly but surely gained a foothold in Hungary and the number of these enterprises will certainly increase in the future. If users continue to take advantage of cryptocurrencies, eventually it will put pressure on regulators to work with it rather than against it, and in turn recognize its potential benefits. Only time will tell whether the industry, market, or national regulators will be able to provide the necessary stability and certainty in the virtual currency market with scalable regulation

[29]Mayer Brown (2022) *Crypto-exposure standards finalized by Basel Committee*. Available at: https://www.mayerbrown.com/en/perspectives-events/publications/2022/12/crypto-exposure-standards-finalized-by-basel-committee.

that does not hinder further financial innovation. However, one thing is for sure, cryptocurrencies will certainly have a long-term impact on the financial scene not only in Hungary, but all over the world.

REFERENCES

Agata Ferreira, Philipp Sandner, *EU Search for Regulatory Answers to Crypto Assets and Their Place in the Financial Markets' Infrastructure*, Computer Law & Security Review, Vol. 43, 2021, pp. 1–12.

Bank for International Settlements, The Crypto Ecosystem: Key Elements and Risks, July 2023, p. 11.

Basel Committee on Banking Supervision, Consultative Document: Second Consultation on the Prudential Treatment of Cryptoasset Exposures. Issued for comment by 30 September 2022, June 2022.

Basel Committee on Banking Supervision, *Prudential treatment of cryptoasset exposures*, 2022.

Bujtár Zoltán, A decentralizált pénzügyek (DeFi) főbb jogi szabályozási kihívásai, in *Fintech - DeFi - Kriptoeszközök: Gazdasági és Jogi Lehetőségei és Kockázatai*, Pécsi Tudományegyetem Állam- és Jogtudományi Kar, 2022, p. 32.

Chao Deng, Lingling Wei, *China Cracks Down on Bitcoin, PBOC Orders Big Banks to Close Trading Accounts in Virtual Currency*, The Wall Street Journal, 2014.

Christopher P. Buttigieg, Christos Efthymiopoulos, *The Regulation of Crypto Assets in Malta: The Virtual Financial Assets Act and Beyond*, Law and Financial Markets Review, Vol. 13, No. 1, 2019, pp. 30–40.

Gábor Tamás, Kiss Gábor Dávid, Bevezetés a kriptovaluták világába, *Gazdaság és Pénzügy*, Vol. 1, No. 5, 2018, p. 31.

Magyar Nemzeti Bank, Kriptovaluta-nyereségrészesedési jog: Fokozott befektetői kockázatok. *Sajtóközlemény*, 2020.

Marcin Szczepanski, *Bitcoin: Market, Economics, and Regulation*, European Parliamentary Research Service, November 2014, p. 9.

Nagy Zoltán, *A kriptopénzek helye és szerepe a pénzügyi rendszerben*, Miskolci Jogi Szemle, Vol. 14, No. 2, 2019, pp. 6–15.