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International Regulation of Stablecoins

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Abstract

This paper aims to critically examine whether stablecoins, a particular type of cryptocurrencies, would fit within existing regulatory frameworks and whether it is timely and actionable to introduce new regulations. We argue that developing a dedicated regulatory and oversight framework is necessary, feasible and supportive of digital innovation, as it will mitigate risks such as market manipulation, investor fraud and herding. Sound regulation, especially in the initial phases of stablecoins' development, will be a make-or-break factor in stablecoins' progression towards broader applicability.

Keywords

Cryptocurrencies, stablecoins, Bitcoin, Diem, financial regulation.

1. Introduction

The expansion of the cryptocurrency market in the last 10 years has been exponential, and as of the start of 2021, more than 4,000 cryptocurrencies have been available to users and investors around the world. After a brief decline in 2018, the volume of new initial coin offerings (ICOs)¹ has regained momentum and the total capitalisation of these assets has recently exploded to over US\$2.6 trillion². The market remains dominated by Bitcoin, with a total capitalisation of over US\$1.2, or approximately 45% of the cryptocurrency market (October 2021). Nevertheless, there are legitimate concerns that the ‘crypto-bubble’ could burst³, and regulators have warned that ‘if consumers invest in these types of product, they should be prepared to lose all their money’⁴.

Attracted by the success of Bitcoin and other major virtual assets, numerous blockchain platforms are emerging, spreading and promising high returns. However, most such start-ups trade below their issue prices one year after launch, while one in three projects lose their value⁵. Collective euphoria and mimicry create speculative bubbles, and when these bubbles cease to grow, they may be followed by a brutal collapse in prices, which is not uncommon in the crypto-assets market⁶. The growth of crypto markets, if it continues at the current pace, may become a new source of risk to consumers and financial stability in general⁷, as correlations with financial markets and interlinkages with the real economy gradually increase.

Stablecoins promise to improve the design of cryptocurrencies, minimise price volatility and mitigate the risks of market manipulation, herding and fraud.

¹ In the context of an ICO, a business issues digital tokens to raise funds from investors. The issuer publishes a ‘white paper’ with information on the project and the use of funds and promotes the issuance on the web and social media. Digital tokens are issued in exchange for fiat currencies, but they can also be exchanged for other cryptocurrencies, especially the most widely traded.

² *European Parliament*, “Crypto Assets: Key Developments, Regulatory Concerns and Responses”, Study requested by the ECON committee, EP 648 779, April 2020. For data on the capitalization of the market, see: <https://coinmarketcap.com>

³ *I. Moosa*, “The Bitcoin: A Sparkling Bubble or Price Discovery?”, *Journal of Industrial and Business Economics*, vol. 47, p. 93 ff; *A. Adriano*, “A Short History of Crypto Euphoria”, *IMF Finance & Development*, Vol. 55(2), 2018, p. 20 ff.

⁴ *Financial Conduct Authority*, “FCA warns consumers of the risks of investments advertising high returns based on cryptoassets”, FCA Press Release, 11 January 2021; *CNBC*, “Cryptocurrency investors should be prepared to lose all their money, Bank of England governor says”, 7 May 2021.

⁵ *EY*, “Initial Coin Offerings (ICOs) The Class of 2017 - One Year Later”, EY Study 2018.

⁶ *K. Grobys, N. Sapkota*, “Predicting Cryptocurrency Defaults”, *Applied Economics*, vol. 52(46), 2020, p. 5060 ff.

⁷ *D. Zetschke et al.*, “The ICO Gold Rush: It’s a Scam, It’s a Bubble, It’s a Super Challenge for Regulators”, *European Banking Institute Working Paper*, 2018, No 18; *I. Chiu*, “A New Era in FinTech Payment Innovations? A Perspective from the Institutions and Regulation of Payment Systems”, *Law, Innovation and Technology*, vol. 9(2), 2017, p. 190 ff.

Stablecoins are designed to be used for payments by retaining a stable value relative to a specified asset, or a pool/basket of assets, with fiat-backed stablecoins being the most prevalent type. The existence of such a stabilisation mechanism could ultimately prevent price bubbles, which are fuelled by price volatility and sensitivity to ‘investor sentiment and policy stances’⁸. In this context, it is worth exploring whether stablecoins would fit within existing regulatory frameworks and whether it is timely and actionable to introduce new regulations. Due to the complexity of stablecoins and digital financial instruments in general, regulators need to cautiously evaluate the effectiveness of existing regulatory approaches before creating new responses and deploying them at national and multilateral levels⁹.

2. The Current State of the Market for Stablecoins

Stablecoins are a phenomenon still under development, and their potential to ensure a stable store of value is far from indisputable. Nevertheless, support for this idea increases, as does the likelihood of stablecoins becoming widespread and soon to compete with bank payments, credit cards and electronic wallets as means of e-commerce payments. The use of stablecoins raises broader issues for international financial stability and the international monetary system¹⁰, and it drives central banks to explore the idea of central digital bank currencies (see Section V).

The first stablecoins to be regulated were issued in 2018 by Gemini and Paxos and granted approval by the New York Department of Financial Services. Since then, several stablecoin projects have materialised (Tether USDT, USD Coin, Binance USD, Dai, etc.), with their market capitalisation reaching US\$130 billion (October 2021). This is only a fragment of the market for cryptocurrencies, but regulators and market participants brace for a race for global stablecoins, fuelled by the announcement of Facebook’s Diem (ex-Libra) project. All eyes remain on this project, which aims to create a global stablecoin built on blockchain technology

⁸ W. Härdle et al., “Understanding Cryptocurrencies”, *Journal of Financial Econometrics*, Vol. 18, No 2, 2020, pp. 181–208.

⁹ *Financial Stability Board*, “Regulatory issues of stablecoins”, October 2019, available at: <https://www.fsb.org/2019/10/regulatory-issues-of-stablecoins> (accessed 21 October 2021)

¹⁰ *G7 Working Group on Stablecoins*, “Investigating the impact of global stablecoins”, October 2019, available at: <https://www.bis.org/cpmi/publ/d187.pdf> (accessed 21 October 2021)

and backed by real currencies¹¹. In its (more ambitious) initial design, Facebook's stablecoin was to be linked to a basket of currencies (US dollars, euros, yens, pounds and Singapore dollars), thus offering a new stablecoin and payment system to hundreds of millions of users across multiple jurisdictions via Facebook Pay, WhatsApp Pay and Instagram Pay. Faced with intense regulatory scrutiny and the loss of key backers, such as Visa and Mastercard, the project was revised and watered down in 2020. In its new version, the Diem project will offer several stablecoins that will be backed one-to-one by national fiat currencies. The first pilot stablecoin will be pegged to the US dollar, and its launch was announced for early 2022.

Several criteria have been proposed for the taxonomy of stablecoins¹², such as the accountability of the issuer for satisfying claims or the use of currencies, off-chain assets, on-chain assets or simply expectations to support the value of a stablecoin. If stablecoins are backed by funds ('tokenised funds') or traditional asset classes ('off-chain collateralised stablecoins'), such assets are held for safekeeping by the issuer or a custodian to ensure redeemability. If stablecoins are backed by on-chain assets ('on-chain collateralised stablecoins') or users' expectations ('algorithmic stablecoins'), there is no need for custody of the underlying asset. In all cases, it is evident that the stabilisation mechanism is the core of any stablecoin initiative. Tasks related to the stabilisation mechanism may be undertaken by accountable institutions, such as the issuer or a custodian, or delegated to users.

To determine whether a cryptocurrency has the potential to expand reach and qualify as a global stablecoin, regulators should consider a series of factors, such as the number of users, the value of transactions and stablecoins in circulation, the size of reserve assets, the market share in payments and remittances, the interconnectedness with financial institutions, etc.¹³

¹¹ The Libra project was announced in June 2019 and renamed Diem in December 2020. The White Paper of the project is available at: <https://www.diem.com/en-us/white-paper/> (accessed 21 October 2021)

¹² *D. Bullmann et al.*, "In Search for Stability in Crypto-Assets: Are Stablecoins the Solution?", ECB Occasional Paper No. 230, 2019.

¹³ *Financial Stability Board*, "Regulation, Supervision and Oversight of Global Stablecoin Arrangements", Final Report and High-Level Recommendations, October 2020, available at: <https://www.fsb.org/2020/10/regulation-supervision-and-oversight-of-global-stablecoin-arrangements/> (accessed 21 October 2021)

3. The Building Blocks of a Dedicated Regulatory and Oversight Framework

Stablecoins constitute an enthralling financial and technological concoction that has the potential to mitigate some risks in crypto-markets, but only sound regulation and oversight in this market segment can ensure consumer protection and financial stability. The risks that are associated with global stablecoins are not negligible¹⁴, and they include (i) governance challenges due to the decentralised nature of global stablecoins; (ii) liquidity and credit risks associated with stabilisation mechanisms and redemption arrangements; (iii) risk of fraud and market manipulation¹⁵; (iv) money laundering/terrorist financing risks; and (iv) substandard operation resilience of the digital infrastructure used for issuing and exchanging stablecoins. Most of these risks are common for all virtual assets, but risks associated with the design and function of stabilisation mechanisms and redemption arrangements are specific to stablecoins. In most jurisdictions, including the US, regulators have issued guidance and warnings on the risk associated with cryptocurrencies, while they have also initiated enforcement action and filed court cases against issuers and traders for violating financial regulations¹⁶.

There is international consensus that regulatory initiatives to mitigate these risks need to ensure public trust, adequate protection of users, safe and transparent management of assets, digital operational resilience and prudent supervision¹⁷. For its part, the International Organisation of Securities Commissions (IOSCO) has also pointed out that some features of stablecoins may be typical of regulated securities, which may trigger the application of IOSCO standards on registration, disclosure, reporting, etc,¹⁸, as well as the application of CPMI-IOSCO principles for financial market infrastructures. The 10 High-Level Recommendations of the Financial Stability Board also provide guidance on the regulation and oversight of global stablecoin arrangements¹⁹. Several jurisdictions have taken regulatory action aligned with this emerging international approach,

¹⁴ *Ibid.*

¹⁵ N. Gandal et al., “Price Manipulation in the Bitcoin Ecosystem”, *Journal of Monetary Economics*, vol. 95, 2018, pp. 86–96

¹⁶ I. Kapsis, “Blockchain and cryptocurrencies: essential tools in a two-tier financial system”, *Capital Markets Law Journal*, Vol. 15, No 1, 2020, pp. 18–47.

¹⁷ *G7 Working Group on Stablecoins*, op. cit.

¹⁸ *International Organization of Securities Commissions*, “Global Stablecoin Initiatives”, Public Report, OR01/2020, available at: <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD650.pdf> (accessed 21 October 2021)

¹⁹ *Financial Stability Board*, 2020, op. cit.

including the EU, which has opted for creating special rules and enhanced requirements for the more systemic and significant stablecoins (see following section).

In order to optimally design a dedicated regulatory and oversight framework for stablecoins, legislators, regulatory authorities and standard-setting bodies will first need to determine the supervisory classification of such instruments and then the risks and necessary response, in terms of regulatory requirements and oversight safeguards, that will apply. To increase transparency and public trust, regulation needs to impose governance standards and enhanced disclosure requirements for issuers of stablecoins, including disclosures on potential claims, conflicts of interest and, most importantly, disclosure of stabilisation mechanisms. Sound regulation and oversight could prevent scandals, such as in the case of the crypto asset trading platform QuadrigaCX, which collapsed in 2019 after reportedly losing \$170 million in users' funds and covering up what was actually a Ponzi scheme²⁰. In a more recent case, the issuers of stablecoin Tether have agreed to settle a lawsuit with the New York Attorney General's Office and increase transparency over the reserve of US dollars that backs the stablecoin²¹.

Moreover, holders of stablecoins need to be given some minimum rights and claims against the issuer. In the case of stablecoins that are backed by funds or other off-chain traditional asset classes, there needs to be a commitment of redeemability. In this context, a distinction must be made between e-money tokens, which reference a single currency, and asset-referenced tokens, which reference multiple currencies, commodities, crypto-assets or a combination of such assets. In the case of e-money tokens, regulation should ensure a 'one-to-one' redemption right. In the case of asset-referenced tokens, the issuer should be required to establish liquidity arrangements with the service providers trading these tokens, as well as arrangements to pay proceeds to holders in case operations are suspended.

²⁰ *Ontario Securities Commission*, "QuadrigaCX: A Review by Staff of the Ontario Securities Commission", Investigative Report, 14 April 2020.

²¹ *Attorney General of the State of New York*, Settlement Agreement in the Matter of Investigation of iFINEX Inc., BFXNA Inc., BFXWW Inc., Tether Holdings Limited, Tether Operations Limited, Tether Limited, Tether International Limited, 17 February 2021.

4. The European Approach to the Regulation and Oversight of Stablecoins

In the context of its Digital Finance Strategy adopted in 2020, the EU has put forward new legislative initiatives and introduced a comprehensive regulatory framework for markets in crypto-assets. It has been correctly pointed out that these initiatives, as well as the initiative of the European Central Bank on a digital euro, have been ‘a clear message against the Libra project’²². The EU strategy is aligned with the guiding principles of the G7 and the Financial Stability Board, but it goes one step further. The biggest advantage of the new EU legislative framework will be the ‘EU passport’, allowing crypto-asset service providers to operate across the entire EU Single Market, provided that they comply with the new regulatory requirements and obtain authorisation in one EU Member State.

The key component of the new framework is the European Commission’s proposal for a Regulation on Markets in Crypto-Assets (MiCA)²³, which aims to ensure consumer protection and financial stability. MiCA has a broad scope and it covers not only issuers of virtual assets, but also all types of service providers in crypto-markets, such as trading platforms, crypto-exchanges and digital wallet providers. Financial institutions are allowed to carry out activities in crypto-markets without additional authorisation, as long as authorisation to provide financial services has been granted under the Directive on Markets in Financial Instruments (MiFID II). MiCA follows the principle ‘same activity, same risks, same rules, same supervision’, thus establishing a level playing field among participants in crypto-asset markets, be they traditional financial institutions or FinTech start-ups. Most of these entities were already subject to regulation and supervision for the purposes of anti-money laundering (AML)²⁴. Some technological companies, such as wallet providers, were even considered electronic money providers and, thus, were required to obtain financial licences.

MiCA introduces new requirements for crypto-asset service providers that also apply to stablecoins. Recognising that the offer of financial instruments in the virtual realm challenges ‘regulatory frameworks based on territorial jurisdiction’²⁵,

²² O. Read, S. Schäfer, “Libra Project: Regulators Act on Global Stablecoins”, *Intereconomics*, Vol. 55, No 6, 2020, pp. 392–398

²³ Proposal for a Regulation of the European Parliament and of the Council on Markets in Crypto-assets, and amending Directive (EU) 2019/1937, COM (2020) 593 final.

²⁴ G. Pavlidis, “International Regulation of Virtual Assets under FATF’s New Standards”, *Journal of Investment Compliance*, vol. 21(1), 2020, p. 1 ff.

²⁵ R. Lastra, J. Allen, “Virtual Currencies in the Eurosystem: Challenges Ahead”, European Parliament Study, 2018.

MiCA requires that service providers establish and maintain a physical presence and hold authorisation from a national competent authority in an EU Member State. MiCA correctly imposes capital requirements²⁶ and governance standards for crypto-asset service providers, such as integrity standards for management bodies, complaint-handling procedures and segregation of clients' assets from those of the service provider. To mitigate the risk of market manipulation and insider dealings, MiCA requires that service providers ensure sound and adequate internal control and risk assessments. MiCA also prohibits misleading market communications and requires issuers to publish a white paper with pertinent information on the issuer, the use of funds and the rights, obligations and risks of the investors. Finally, the EU digital finance package addresses the problem of digital operational resilience and introduces IT requirements to mitigate security and operational risks, such as hacks and digital heists (DORA Act)²⁷.

In addition to rules that apply to all crypto-asset service providers, MiCA introduces enhanced requirements for stablecoins. A distinction is made between 'significant e-money tokens' and 'significant asset-referenced tokens', with the first category referencing a single currency and the second referencing multiple currencies, commodities, other crypto-assets or a combination of these. MiCA requires that issuers of stablecoins disclose potential claims, conflicts of interest and the stabilisation mechanism, which is the key element of stablecoin design. Under art. 32 par. 4 of the MiCA, the composition and management of the reference assets must be transparent, including the value of the assets, their allocation in the reserve and the assessment of risks. Furthermore, holders of stablecoins will have minimum rights, such as claims against the issuer. Holders of e-money tokens will have a one-to-one redemption right; thus, MiCA strengthens the safeguards of the EU Electronic Money Directive²⁸. Issuers of asset-referenced tokens are required to come to an agreement with the service providers trading these tokens regarding liquidity arrangements; they also need to have in place arrangements to pay out proceeds to holders in case the service provider stops its operations.

²⁶ *Basel Committee on Banking Supervision*, "Designing a prudential treatment for crypto-assets", Basel Committee Consultative Paper, 2019, p. 11 ff.

²⁷ Proposal for a Regulation of the European Parliament and of the Council on digital operational resilience for the financial sector and amending Regulations (EC) No 1060/2009, (EU) No 648/2012, (EU) No 600/2014 and (EU) No 909/2014, COM (2020) 595 final.

²⁸ Directive 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 [2009] OJ L 267/7.

5. The Crowning Glory of the Digital Asset Marketplace or Just a Fad?

Classic and contemporary economic literature has highlighted the connections between rapid innovation and the creation of ‘excessive hype, fads and hyperbole’²⁹. Are we in the midst of a hype cycle, which begins with a technology breakthrough, followed by inflated expectations and, ultimately, disillusionment?³⁰ Will this lead to the mainstream adoption of innovative blockchain applications by businesses or is it just a fad?

We argue that developing a dedicated regulatory and oversight framework is necessary, feasible and supportive of digital innovation, as it will mitigate risks such as market manipulation, investor fraud and herding. Sound and harmonised regulation and standards, especially in the initial phases of stablecoins’ development, will be a make-or-break factor in stablecoins’ progression towards broader applicability.

Contrary to the EU, where authorisation of a crypto assets service provider in one member state would allow it to operate across the single market (EU MiCA proposal), the legal landscape surrounding cryptocurrencies differentiates considerably around the world, from non-regulation to overregulation. Considering fragmentation, the development of common standards on stablecoins (registration requirements, disclosure obligations, investment restrictions, supervision mechanisms, etc.) could facilitate trading in multiple jurisdictions while mitigating risks to international financial stability. Ensuring effective regulation and oversight at the international level is also important ‘to prevent any potential gaps and avoid regulatory arbitrage’³¹.

A last factor that should be considered is the development of the central bank digital currencies (CBDC), which will race with privately developed stablecoins to gain mainstream adoption. Several central banks are already exploring the idea, proceeding with caution and implementing pilot projects³². Compared with privately developed stablecoins, CBDCs offer the advantage of central bank backing, while they prevent conflicts of interest with regard to the

²⁹ *D. Arner et al.*, “Stablecoins: risks, potential and regulation”, BIS Working Papers, No 905, 2020.

³⁰ *Gartner Glossary*, available at: <https://www.gartner.com/en/glossary>

³¹ *Financial Stability Board*, 2020, op. cit.

³² *C. Barontini, H. Holden*, “Proceeding with Caution: A Survey on Central Bank Digital Currency”, BIS Papers, No 101, 2019.

stabilisation mechanism³³. They also offer more stability, as they are essentially digital representations of the currency that they reference. Since 2020, the ECB has explored the idea of issuing a digital Euro³⁴, including a public consultation and technical experimentation, with the final decision of the ECB being expected in 2021. Such initiatives seem to have been accelerated by the announcement of the Diem (ex-Libra) project, as central banks perceive the threats posed by this global initiative; indeed, there are legitimate concerns that the ability of central banks to implement monetary policies may be compromised by the development of global stablecoins³⁵.

Whether CBDCs or their private counterparts win the race for mainstream adoption, it is certain that blockchain will render global finance even more interconnected in a borderless world, challenging existing models of regulation and oversight. This highlights the importance of international standard-setting and establishing cooperation arrangements among competent national authorities to efficiently mitigate risks at the international level.

³³ *D. Arner et al.*, *op. cit.*

³⁴ *European Central Bank*, “Report on a digital euro”, ECB Report, October 2020.

³⁵ *M. Adachi et al.*, “A Regulatory and Financial Stability Perspective on Global Stablecoins”, *European Central Bank Macroeprudential Bulletin*, No 10, 2020, pp. 1–10.

Bibliography

M. Adachi, M. Cominetta, C. Kaufmann, A. van der Kraaij, “A Regulatory and Financial Stability Perspective on Global Stablecoins”, European Central Bank Macroprudential Bulletin, No 10, 2020, pp. 1–10.

A. Adriano, “A Short History of Crypto Euphoria”, IMF Finance & Development, Vol. 55(2), 2018, p. 20 ff.

D. Arner, R. Auer, J. Frost, “Stablecoins: risks, potential and regulation”, BIS Working Papers, No 905, 2020, pp. 1-29.

Attorney General of the State of New York, Settlement Agreement in the Matter of Investigation of iFINEX Inc., BFXNA Inc., BFXWW Inc., Tether Holdings Limited, Tether Operations Limited, Tether Limited, Tether International Limited, 17 February 2021.

C. Barontini, H. Holden, “Proceeding with Caution: A Survey on Central Bank Digital Currency”, BIS Papers, No 101, 2019, pp. 1–20.

Basel Committee on Banking Supervision, “Designing a prudential treatment for crypto-assets”, Basel Committee Consultative Paper, 2019.

D. Bullmann, J. Klemm, A. Pinna, “In Search for Stability in Crypto-Assets: Are Stablecoins the Solution?”, ECB Occasional Paper No. 230, 2019.

I. Chiu, “A New Era in FinTech Payment Innovations? A Perspective from the Institutions and Regulation of Payment Systems”, Law, Innovation and Technology, vol. 9(2), 2017, p. 190 ff.

CNBC, “Cryptocurrency investors should be prepared to lose all their money, Bank of England governor says”, 7 May 2021.

European Central Bank, “Report on a digital euro”, ECB Report, October 2020.

European Parliament, “Crypto Assets: Key Developments, Regulatory Concerns and Responses”, Study requested by the ECON committee, EP 648 779, 2020.

EY, “Initial Coin Offerings (ICOs) The Class of 2017 - One Year Later”, EY Study, 2018.

Financial Conduct Authority, “FCA warns consumers of the risks of investments advertising high returns based on cryptoassets”, FCA Press Release, 11 January 2021.

Financial Stability Board, “Regulatory issues of stablecoins”, October 2019, available at: <https://www.fsb.org/2019/10/regulatory-issues-of-stablecoins> (accessed 21 October 2021).

Financial Stability Board, “Regulation, Supervision and Oversight of Global Stablecoin Arrangements”, Final Report and High-Level Recommendations, October 2020, available at: <https://www.fsb.org/2020/10/regulation-supervision-and-oversight-of-global-stablecoin-arrangements/> (accessed 21 October 2021)

G7 Working Group on Stablecoins, “Investigating the impact of global stablecoins”, October 2019, available at: <https://www.bis.org/cpmi/publ/d187.pdf> (accessed 21 October 2021).

N. Gandal, J. Hamrick, T. Moore, T. Oberman, “Price Manipulation in the Bitcoin Ecosystem”, *Journal of Monetary Economics*, vol. 95, 2018, pp. 86–96.

K. Grobys, N. Sapkota, “Predicting Cryptocurrency Defaults”, *Applied Economics*, vol. 52(46), 2020, p. 5060 ff.

W. Härdle, C. Harvey, R. Reule, “Understanding Cryptocurrencies”, *Journal of Financial Econometrics*, Vol. 18, No 2, 2020, pp. 181–208.

International Organization of Securities Commissions, “Global Stablecoin Initiatives”, Public Report, OR01/2020, available at: <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD650.pdf> (accessed 21 October 2021).

I. Kapsis, “Blockchain and cryptocurrencies: essential tools in a two-tier financial system”, *Capital Markets Law Journal*, Vol. 15, No 1, 2020, pp. 18–47.

R. Lastra, J. Allen, “Virtual Currencies in the Eurosystem: Challenges Ahead”, *European Parliament Study*, 2018.

I. Moosa, “The Bitcoin: A Sparkling Bubble or Price Discovery?”, *Journal of Industrial and Business Economics*, vol. 47, 2020, p. 93 ff.

Ontario Securities Commission, “QuadrigaCX: A Review by Staff of the Ontario Securities Commission”, *Investigative Report*, 14 April 2020.

G. Pavlidis, “International Regulation of Virtual Assets under FATF’s New Standards”, *Journal of Investment Compliance*, vol. 21(1), 2020, p. 1 ff.

O. Read, S. Schäfer, “Libra Project: Regulators Act on Global Stablecoins”, *Intereconomics*, Vol. 55, No 6, 2020, pp. 392–398.

D. Zetschke, R. Buckley, D. Arner, L. Föhr, “The ICO Gold Rush: It’s a Scam, It’s a Bubble, It’s a Super Challenge for Regulators”, *European Banking Institute Working Paper*, No 18, 2018.