All That Glitters Is Not Gold: The Regulation of Stablecoins under the MiCA Regulation—Between Innovation and Risk Mitigation

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ABSTRACT

This article examines the regulation of stablecoins under the EU's MiCA Regulation. It assesses the balance that the MiCA Regulation aims to strike between promoting innovation and market competitiveness in disruptive financial technologies, on the one hand, and effectively managing the risks inherent to the financial sector, on the other hand. After a review of the development of stablecoin regulation, this article examines both the broader regulatory model and specific provisions of the MiCA Regulation through two lenses: (i) the promotion of financial innovation by providing legal certainty through a sector-specific legal regime; and (ii) a risk-based approach leveraging existing tools to ensure financial stability and investor protection in the light of past turbulence in the crypto sector. Lastly, this article addresses the long-term global competitiveness of the EU single market with regard to stablecoins and suggests that the adoption of a set of global common standards as well as international cooperation are necessary effectively to ensure the objectives of the MiCA Regulation.

Keywords: stablecoins, MiCAR, MiCA Regulation, crypto, EU law, EU financial regulation

I. INTRODUCTION

In scientific terms, 'mica' refers to a group of silicate minerals known for their glittering characteristics. The term derives from the Latin word *micare*, meaning 'to glitter'. Since the European Union ('EU') announced its Regulation on Markets in Crypto-Assets[1] (the 'MiCA Regulation'), the word has gained a further meaning. Fittingly, crypto-assets commonly find themselves caught between glamour and high risk in the public's perception due to their inherent volatility.[2] Events such as Bitcoin's value plummeting by 50 per cent within only a few hours in 2015 and a performance of over 300 per cent over the course of 2020[3] demonstrate the volatility of these financial assets. This volatility spurred a notable demand for crypto-

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[1] Regulation (EU) 2023/1114 of the European Parliament and of the Council of 31 May 2023 on markets in crypto-assets, and amending Regulations (EU) No 1093/2010 and (EU) No 1095/2010 and Directives 2013/36/EU and (EU) 2019/1937 [2023] OJ L150/40 ('MiCAR').

[2] ESMA, *Crypto-Assets and Their Risks for Financial Stability* (Publications Office of the European Union 2022) 4.

[3] 'Bitcoin Price History: 2009 – 2024' (*Bitcoin Magazine*, 2 March 2023) <https://bitcoinmagazine.com/guides/bitcoin-price-history> accessed 9 June 2024.

assets offering a steady value. A crypto-asset with a steadier value increases the number of use cases in decentralised finance ('DeFi'), which builds on distributed ledger technologies ('DLTs'),[4] such as blockchain, to offer services such as trading, lending, and investing without using a traditional centralised intermediary.[5] This facilitates the trading of digital assets, peer-to-peer and cross-border payments, as well as other financial services on decentralised markets in a fashion that seeks to avoid price fluctuations.[6] In response to this demand, stablecoins were created.[7]

Stablecoins are defined by the Financial Stability Board ('FSB') as privately issued 'crypto-asset[s] designed to maintain a stable value relative to another asset', such as one or more official government-issued currencies ('fiat currencies'), other assets, and/or commodities.[8] In contrast to central bank digital currencies, stablecoins may also be issued by private entities and not only by central banks.[9] As stablecoins seek to maintain a stable value by reference to another form of asset—be that a currency or a commodity—they are also to be distinguished from other common forms of crypto-assets, such as cryptocurrencies (e.g. Bitcoin or Ethereum), as cryptocurrencies are not pegged to an external reference value.

Stablecoins take on a variety of different forms and are typically categorised according to their collateral and stabilisation mechanisms, distinguishing between tokenised funds, off-(block)chain collateralised, on-(block)chain collateralised, and algorithmic stablecoins.[10] Tokenised funds are pegged to the value of a single fiat currency,[11] whereas the value of other stablecoins can in principle be linked to any (crypto-)asset.[12] Algorithmic stablecoins, in contrast, are not backed by a reserve of assets, but 'aim to maintain a stable value' in relation to a fiat currency or other assets via protocols that 'provide for the increase or decrease in the supply of such crypto-assets in response to changes in demand'.[13] They are therefore often perceived as less stable and riskier.[14] The MiCA Regulation does not expressly recognise stablecoins as a standalone category, but creates two new regulatory categories of tokens that aim to maintain a stable value: (i) asset-referenced tokens; and (ii) e-money tokens. Asset-referenced tokens are defined in the MiCA Regulation as crypto-assets that aim to maintain a stable

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[4] Under the MiCA Regulation, 'DLT' means a technology that enables the operation and use of distributed ledgers (an information repository that keeps records of transactions and is shared across, and synchronised between, a set of DLT network nodes using a consensus mechanism): MiCAR, arts 3(1)(1)–(2).

[5] Raphael Auer and others, 'The Technology of Decentralized Finance (DeFi)' (2023) BIS Working Papers No 1066, 2 <https://www.bis.org/publ/work1066.htm> accessed 9 June 2024.

[6] Gordon Y Liao and John Caramichael, 'Stablecoins: Growth Potential and Impact on Banking' (2022) International Finance Discussion Paper No 1334, 6 <https://doi.org/10.17016/IFDP.2022.1334> accessed 23 February 2024.

[7] Rachel Wolfson, 'An Explanation for the Rise of "Stable Coins" as a Low-Volatility Cryptocurrency' (*Forbes*, 29 March 2018) <https://www.forbes.com/sites/rachelwolfson/2018/03/29/an-explanation-for-the-rise-of-stable-coins-as-a-low-volatility-cryptocurrency/> accessed 23 February 2024.

[8] FSB, 'Decentralised Financial Technologies: Report on Financial Stability, Regulatory and Governance Implications' (6 June 2019) 27 <https://www.fsb.org/2019/06/decentralised-financial-technologies-report-on-financial-stability-regulatory-and-governance-implications/> accessed 23 February 2024.

[9] Oriol Caudevilla and others, 'Stablecoins: An Introduction and Recommendations for the European Union' (Private Digital Euro Working Group, August 2022) 7 <https://7869715.fs1.hubspotusercontent-na1.net/hubfs/7869715/Private%20Working%20Group%20paper.pdf> accessed 23 February 2024.

[10] Dirk Bullmann, Jonas Klemm and Andrea Pinna, 'In Search for Stability in Crypto-Assets: Are Stablecoins the Solution?' (2019) ECB Occasional Paper Series No 230, 9–10 <https://data.europa.eu/doi/10.2866/969389> accessed 23 February 2024.

[11] Probably the most well-known example is Tether, which is pegged to the US dollar ('USDT'): see 'Tether token' (*tether*) <https://tether.to/en/> accessed 23 February 2024.

[12] For example, gold (e.g. Paxos), government bonds, or other crypto-assets (e.g. DAI).

[13] MiCAR, recital 41. An example of this is the oldest algorithmic stablecoin, NuBits.

[14] Christian Catalini, Alonso de Gortari and Nihar Shah, 'Some Simple Economics of Stablecoins' (2021) MIT Sloan Research Paper No 6610-21, 13 <https://ssrn.com/abstract=3985699> accessed 9 June 2024.

value by reference to another value or right, including one or more official currencies,[15] whereas e-money tokens are defined as crypto-assets that aim to maintain a stable value by reference to the value of one official currency.[16] The MiCA Regulation explicitly clarifies that algorithmic stablecoins, which are based on protocols that provide for an increase or decrease in supply in response to changes in demand and also aim to achieve a stable value, are to be included in these definitions.[17] Consequently, these new EU regulatory categories target the broad category of assets commonly known as stablecoins without explicitly defining them by reference to this term. When referring to the regulation of stablecoins within the context of the MiCA Regulation, this article adopts the EU's regulatory parlance and therefore refers to both asset-referenced tokens and e-money tokens as stablecoins.

Stablecoins are typically issued in two steps. First, an equivalent value is transferred to a stablecoin issuer. Secondly, by means of a 'smart contract', code deployed and run in a blockchain or other DLT environment,[18] stablecoins are automatically issued to the recipient on the distributed ledger when coded, pre-defined conditions are met, such as the transfer of the corresponding monetary value for the stablecoins.[19]

By introducing the MiCA Regulation, the EU has taken a significant step to establish an attractive regulatory framework and market for crypto-assets with provisions relating to stablecoins entering into force on 30 June, 2024. Using the example of the regulation of stablecoins under the MiCA Regulation, this article analyses the extent to which regulatory measures can strike a balance between fostering a globally competitive environment for the innovation of disruptive technologies and effectively limiting the inherent risks in and for the financial sector.

After a brief review of the development of stablecoin regulation (Section II), this article argues that the prerequisites for innovation in the financial sector include, on one hand, a legally certain regulatory framework (Section III) and, on the other, a nuanced and tailored approach to mitigate risks (Section IV). The article then addresses concerns about the framework's sustainability regarding the long-term global competitiveness of the EU single market. Ultimately, this article contends that there is a need for a comprehensive global approach to the regulation of stablecoins. The analysis is limited to regulatory aspects of stablecoins within the scope of the MiCA Regulation. International perspectives are used selectively to provide additional comparative insights. Private law issues are not explored in detail.

II. THE ANNOUNCEMENT OF A GLOBAL STABLECOIN AS A WAKE-UP CALL FOR REGULATORY ACTION

When stablecoins first emerged in around 2014,[20] they initially attracted minimal regulatory attention. The landscape shifted dramatically with the unveiling of Facebook/Meta's ambitious global stablecoin project, initially named Libra and later rebranded as Diem, in June

[15] MiCAR, art 3(1)(6).
[16] ibid art 3(1)(7).
[17] ibid recital 41.
[18] Primavera De Filippi, Chris Wray and Giovanni Sileno, 'Smart Contracts' (2021) 10(2) Internet Policy Review <https://doi.org/10.14763/2021.2.1549> accessed 23 February 2024.
[19] Weimin Sun, Xun (Brian) Wu and Angela Kwok, *Security Tokens and Stablecoins Quick Start Guide* (Packt Publishing 2019) 180.
[20] The first stablecoin released in July 2014 was BitUSD. Shortly thereafter, NuBits, another crypto-collateralised stablecoin, was released in September of the same year. See further BitMEX Research, 'A Brief History of Stablecoins (Part 1)' (*BitMEX*, 2 July 2018) <https://blog.bitmex.com/a-brief-history-of-stablecoins-part-1/> accessed 23 February 2024.

2019. This initiative aimed to provide a more cost-effective alternative to traditional payment systems.[21] Through its potential to evolve into a systemically relevant payment system with global reach, Libra distinguished itself from previous stablecoin projects.[22]

In response to this development, the G7 promptly established a dedicated Working Group to tackle the challenges and risks stemming from the advent of global, and potentially systematically important, stablecoins.[23] The G7 Working Group concluded that stablecoins have a number of benefits, including the potential to make transactions faster, reduce costs, bolster security, and improve cross-border payments and their resilience.[24] However, it also identified a spectrum of challenges and risks associated with stablecoins, including issues relating to consumer protection, data privacy, taxation, cybersecurity, operational resilience, money laundering, terrorist financing, market integrity, governance, and legal certainty.[25] On a global scale, concerns were raised with regard to the risks posed by stablecoins to monetary sovereignty and policy, the security and efficiency of payment systems, financial stability, and fair competition.[26] This evaluation was mirrored by the Council of the European Union and the European Commission in a joint declaration in December 2019. In this declaration, the Council and the Commission underscored that no global stablecoin should commence operations within the EU until the legal and regulatory challenges and risks associated with such stablecoins had been thoroughly identified and appropriately addressed.[27]

About a year later, the European Commission unveiled the Digital Finance Package as a strategic response, which aimed to address emerging challenges and risks linked to the digital transformation of the single market whilst promoting digital innovation.[28] A key component of this package was the proposal for a comprehensive regulatory framework regulating stablecoins and other crypto-assets: the MiCA Regulation. The MiCA Regulation was designed to achieve a dual objective of both establishing a regulatory environment within the EU that encourages the growth of the crypto economy whilst also safeguarding the stability of financial markets and protecting investors from risks and ensuring legal certainty.[29]

This highlights the inherent tension within the EU's objectives. The EU seeks to create an internationally competitive, digitised internal market through the introduction of regulatory frameworks (such as the MiCA Regulation) that stimulate innovation, whilst preventing excessive risks that could adversely impact the functioning of the single market and other EU objectives. It is to these issues that this article now turns.

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[21] Dirk A Zetzsche, Ross P Buckley and Douglas W Arner, 'Regulating Libra' (2021) 41 OJLS 80.
[22] Taylor Telford, 'Why Governments Around the World Are Afraid of Libra, Facebook's Cryptocurrency' *The Washington Post* (Washington, DC, 12 July 2019) <https://www.washingtonpost.com/business/2019/07/12/why-governments-around-world-are-afraid-libra-facebooks-cryptocurrency/> accessed 23 February 2024.
[23] Benoît Cœuré, 'Update from the Chair of the G7 Working Group on Stablecoins' (*BIS*, 18 July 2019) <https://www.bis.org/cpmi/speeches/sp190718.htm> accessed 23 February 2024.
[24] ibid.
[25] ibid.
[26] G7 Working Group on Stablecoins, 'Investigating the Impact of Global Stablecoins' (BIS, October 2019) 5 <https://www.bis.org/cpmi/publ/d187.pdf > accessed 23 February 2024.
[27] Council of the EU, 'Joint Statement by the Council and the Commission on "Stablecoins"' (*European Council*, 5 December 2019) para 6 <https://www.consilium.europa.eu/en/press/press-releases/2019/12/05/joint-statement-by-the-council-and-the-commission-on-stablecoins/> accessed 23 February 2024.
[28] Commission, 'Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on a Digital Finance Strategy for the EU' (Communication) COM (2020) 591 final.
[29] Commission, 'Digital Finance Package: Commission Sets Out New, Ambitious Approach to Encourage Responsible Innovation to Benefit Consumers and Businesses' (*European Commission*, 30 September 2020) <https://ec.europa.eu/newsroom/representations/items/688865/default> accessed 23 February 2024.

III. LEGAL CERTAINTY AS A FOUNDATION FOR INNOVATION IN THE CRYPTO SECTOR

Since the 2007–2008 global financial crisis, governments and regulators have increasingly sought to regulate financial services to prevent the build-up of systemic risk and, in so doing, have transformed the financial services sector into one of the most highly regulated economic sectors. Consequently, this highly regulated environment reverses the traditional binary paradigm that often opposes regulation and innovation, the latter of which is believed to be impeded by regulation through requirements and prohibitions, thereby restricting certain paths of innovation.[30] However, in the financial services sector, regulation is often seen by academics and regulators alike as essential to ensuring 'systemic stability', maintaining 'the safety and soundness of financial institutions', and protecting investors.[31] Accordingly, innovation in highly regulated markets, such as the financial sector, is only possible with sufficient legal certainty as to the applicable legal regime. The principle of legal certainty requires that the law be clear, precise and unambiguous, and that its legal implications be foreseeable.[32] This is because vague legal frameworks bear the risk of arbitrary decisions which in turn impact investor confidence and, in so doing, may inhibit investment. In the US, for example, crypto service providers, such as Coinbase, are seeking clarity through commencing legal action against the Securities and Exchange Commission ('SEC').[33] At the same time, providers like Circle and Coinbase[34] have announced their relocation to the EU, citing the new MiCA Regulation.

The MiCA Regulation itself stresses the EU's policy interest of 'developing and promoting the uptake of transformative technologies in the financial sector', so as to 'contribute to a future-proof economy'.[35] In this sense, the EU admits that any legislative act adopted in the field of crypto-assets should be specific, 'future-proof', and 'be able to keep pace with innovation and technological developments' whilst being 'founded on an incentive-based approach'.[36] This approach will be examined with regard to legal certainty. In navigating the challenge of balancing legal certainty as to the applicable legal regime with fostering innovation within regulatory frameworks, it will be argued that sector-specific regulations can strike a balance between sector-specific risks and legal certainty (Section III.A). Additionally, the regulatory landscape must adapt to cover innovative and evolving regulatory objects in a manner that is both effective and sustainable (Section III.B).

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[30] See for example Jacques Pelkmans and Andrea Renda, *Does EU Regulation Hinder or Stimulate Innovation?* (Centre for European Policy Studies 2014); Pablo D'Este and others, 'What Hampers Innovation? Revealed Barriers Versus Deterring Barriers' (2012) 41 Research Policy 482.

[31] David Llewellyn, *The Economic Rationale for Financial Regulation* (Financial Services Authority 1999) 9.

[32] See for example the principle of legal certainty in the settled case law of the CJEU: Joined Cases C-72/10 and C-77/10 *Costa and Cifone* [2012] ECR I-0000, para 74.

[33] Paul Grewal, 'Coinbase Takes Another Formal Step to Seek Regulatory Clarity from SEC for the Crypto Industry' (*Coinbase*, 24 April 2023) <https://www.coinbase.com/blog/coinbase-takes-another-formal-step-to-seek-regulatory-clarity-from-sec-for> accessed 23 February 2024.

[34] Benoit Berthelot and Emily Nicolle, 'Circle Picks Crypto-Friendly France for European Headquarters' (*Bloomberg*, 21 March 2023) <https://www.bloomberg.com/news/articles/2023-03-21/circle-picks-crypto-friendly-france-for-european-headquarters?leadSource=uverify%20wall> accessed 9 June 2024; Adrian Weckler, '"America's Loss Can Be Europe's Gain" – Coinbase Chief Legal Officer Paul Grewal on Its Big Move to Ireland and an Anti-Crypto Campaign in the US' (*Irish Independent*, 26 October 2023) <https://www.independent.ie/business/technology/americas-loss-can-be-europes-gain-coinbase-chief-legal-officer-paul-grewal-on-its-big-move-to-ireland-and-an-anti-crypto-campaign-in-the-us/a1125071433.html> accessed 23 February 2024.

[35] MiCAR, recital 1.

[36] ibid recital 16.

A. A REGULATORY GAP REQUIRING COMPREHENSIVE SECTOR-SPECIFIC REGULATION

Without a specific legal framework that regulates stablecoins, various overlapping, existing regulatory frameworks (which often pre-date the advent of stablecoins) can form an obscure and potentially confusing patchwork of regulation and may lead to market participants incurring superfluous compliance costs. In the EU, for example, while various regulatory frameworks, such as the E-Money Directive,[37] the Payment Services Directive,[38] the Fifth Anti-Money Laundering Directive,[39] and the Markets in Financial Instruments Directive ('MiFID II'),[40] exist, many uncertainties have prevailed in relation to the applicability of these frameworks to stablecoins.

Although some stablecoins may qualify as 'financial instruments' within the meaning of MiFID II, some may qualify as 'electronic money' (e-money) within the meaning of the E-Money Directive or as 'virtual currencies' under the Fifth Anti-Money Laundering Directive. Their diversity left a considerable number of stablecoins unregulated, resulting in an unclear patchwork of terms and regulatory regimes.[41] This can be attributed, in part, to definitions within the existing laws that originate from the respective context and objective of their adoption. Understandably, these definitions did not anticipate the relevance of stablecoins, resulting in inconsistencies and incompatibilities. Hence, a (partially) applicable mosaic of terms emerged, encompassing crypto-assets, virtual currencies, electronic money, financial instruments, payment orders, and transferable securities.

Until 2018, neither stablecoins nor other crypto-assets appeared as a distinct category of regulated assets in any EU legal framework. They were first included in 2018 with the introduction of the Fifth Anti-Money Laundering Directive. This Directive introduced terms like 'virtual currencies',[42] 'custodian wallet providers',[43] and 'providers engaged in exchange services between virtual currencies and fiat currencies'.[44] As a result, payment tokens and certain crypto-asset service providers were made subject to EU regulation for the first time. Member States were thus instructed to oversee the licensing of service providers to ensure anti-money laundering compliance. However, the exchange and issuance of crypto-assets, including stablecoins, remained mostly unregulated at the pan-EU level. An exception applied to

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[37] 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 L267/7 ('E-Money Directive').

[38] Directive (EU) 2015/2366 of the European Parliament and of the Council of 25 November 2015 on payment services in the internal market, amending Directives 2002/65/EC, 2009/110/EC and 2013/36/EU and Regulation (EU) No 1093/2010, and repealing Directive 2007/64/EC [2015] OJ L337/35 ('Payment Services Directive').

[39] Directive (EU) 2018/843 of the European Parliament and of the Council of 30 May 2018 amending Directive (EU) 2015/849 on the prevention of the use of the financial system for the purposes of money laundering or terrorist financing, and amending Directives 2009/138/EC and 2013/36/EU [2018] OJ L156/43 ('Fifth Anti-Money Laundering Directive').

[40] Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU [2014] OJ L173/349 ('MiFID II').

[41] Commission, 'Commission Staff Working Document, Impact Assessment Accompanying the Document 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, 10.

[42] Fifth Anti-Money Laundering Directive, art 1(2)(d).

[43] ibid.

[44] ibid art 1(1)(c).

crypto-assets meeting the criteria of 'financial instrument[s]' under MiFID II,[45] which are subject to comprehensive EU regulation under MiFID II.[46] This had previously been confirmed as administrative practice[47] and was later codified as part of the Digital Finance Package. Nevertheless, these sources of regulation, especially the qualification of certain stablecoins as a 'financial instrument' subject to MiFID II, only encompass a limited subset of stablecoins, presenting significant challenges for those stablecoins that do not qualify under existing regulatory frameworks.[48]

Similar challenges arose with regard to the applicability of the E-Money Directive. Under the E-Money Directive, e-money is defined as 'electronically... stored monetary value'. This value is 'represented by a claim on the issuer' which is issued against 'receipt of funds' for payment transactions and accepted by parties other than the issuer.[49] Whether stablecoins are functionally comparable to e-money and, therefore, subject to similar regulation depends on their characteristics, including legal title, redemption terms, and stabilisation mechanisms.[50]

This led to significant uncertainty in the market and highlighted the potentially limited regulatory coverage of stablecoins under existing EU regulatory frameworks, posing risks for investors and market integrity alike.[51] In response, some Member States introduced national rules for certain crypto-assets not covered by the existing legal framework in the EU, resulting in regulatory fragmentation.[52]

The MiCA Regulation aims to address this fragmentation and uncertainty by establishing a harmonised, comprehensive pan-European legal framework to cover previously unregulated or uncertainly regulated stablecoins comprehensively.[53] In so doing, it is imperative that the MiCA Regulation ensures coherence with existing legal frameworks to avoid creating additional regulatory uncertainty and unnecessary compliance costs, and thus potentially restricting market efficiency. In this sense, the MiCA Regulation states that 'crypto-assets that already fall under existing [EU] legislative acts on financial services should remain under the existing regulatory frameworks regardless of the technology used for their issuance or their transfer'.[54] In excluding a number of instruments from its scope, the subsidiary and particular

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[45] MiFID II, art 4(1)(15).

[46] MiCAR, recital 3.

[47] See for example the German Financial regulator (BaFin): BaFin, 'Initial Coin Offerings: BaFin Publishes Advisory Letter on the Classification of Tokens as Financial Instruments' (*BaFin*, 29 March 2018) <https://www.bafin.de/SharedDocs/Veroeffentlichungen/EN/Fachartikel/2018/fa_bj_1803_ICOs_en.html> accessed 23 February 2024; Securities and Markets Stakeholder Group, 'Advice to ESMA: Own Initiative Report on Initial Coin Offerings and Crypto-Assets' (ESMA22-106-1338, 19 October 2018) <https://www.esma.europa.eu/sites/default/files/library/esma22-106-1338_smsg_advice_-_report_on_icos_and_crypto-assets.pdf> accessed 23 February 2024.

[48] Colleen Baker and Kevin Werbach, 'Blockchain in Financial Services' in Jelena Madir (ed), *FinTech: Law and Regulation* (Edward Elgar 2019) 172.

[49] E-Money Directive, art 2(2).

[50] Johannes Ehrentraud and others, *Fintech and Payments: Regulating Digital Payment Services and E-Money* (Bank for International Settlements 2021) 11. For example, among nine major stablecoins, only USDT issued by Tether has been considered e-money, as the others were either not issued upon receipt of funds, had a variable redemption value, or did not grant rights to token holders. See Mykyta Sokolov, 'Are Libra, Tether, MakerDAO and Paxos Issuing E-Money? Analysis of 9 Stablecoin Types under the EU and UK E-Money Frameworks' (2020) <https://papers.ssrn.com/abstract=3746250> accessed 23 February 2024.

[51] Tina van der Linden and Tina Shirazi, 'Markets in Crypto-Assets Regulation: Does It Provide Legal Certainty and Increase Adoption of Crypto-Assets?' (2023) 9(22) Financial Innovation <https://doi.org/10.1186/s40854-022-00432-8> accessed 9 June 2024.

[52] See MiCAR, recital 5. For example, Germany introduced a licensing regime for custody of crypto-assets: see 'Crypto Custody Business' (*BaFin*) <https://www.bafin.de/EN/Aufsicht/BankenFinanzdienstleister/Markteintritt/Kryptoverwahrgeschaeft/kryptoverwahrgeschaeft_node_en.html> accessed 23 February 2024.

[53] MiCAR, recitals 5, 6; Commission, 'Commission Staff Working Document' (n 41) 17.

[54] MiCAR, recital 9.

character of the MiCA Regulation is evident.[55] For example, the MiCA Regulation does not apply if a stablecoin qualifies as a 'financial instrument' within the meaning of MiFID II.[56] For the purpose of ensuring clarity and demarcating the boundary between MiFID II and the MiCA Regulation, the European Securities and Markets Authority ('ESMA') is specifically mandated to issue guidelines on the conditions and criteria for the qualification of a stablecoin as a financial instrument.[57] Within the scope of the MiCA Regulation, the E-Money Directive is exclusively applicable to e-money tokens.[58]

The MiCA Regulation recognises and seeks to remedy other sources of uncertainty as to the applicable legal regime. As a preliminary solution, the authorisation for the issuance of asset-referenced tokens requires a legal opinion that these do not qualify as e-money tokens or are otherwise excluded from the scope of the MiCA Regulation (e.g. because the asset-referenced token qualifies as a financial instrument under MiFID II).[59] To ensure convergence and certainty in this regard, the European Supervisory Authorities ('ESAs')—comprising the European Banking Authority ('EBA'), the European Insurance and Occupational Pensions Authority ('EIOPA'), and the ESMA—are specifically tasked with jointly issuing guidelines, a template, and 'a standardised test for the classification of crypto-assets' by 30 December, 2024.[60]

In summary, while some uncertainty remains to be addressed through implementing measures and the publication of additional guidelines, the MiCA Regulation seeks to introduce a comprehensive sectoral legal framework, fulfilling the requirement for legal certainty with regard to the applicable legal regime within the MiCA Regulation whilst ensuring tessellation with existing legal frameworks for stablecoins. Therefore, in the author's view, the MiCA Regulation honours its objectives by attracting innovation to the EU single market through the incentive of a comprehensive legal framework that seeks to provide legal certainty to market participants.

B. THE ADOPTION OF NEW REGULATORY CATEGORIES TO DEFINE STABLECOINS SUSTAINABLY

Fostering legal certainty as to the regulatory perimeter for participants in markets in crypto-assets is a key objective of the MiCA Regulation[61] and is necessary for appropriate regulatory treatment and (judicial) review. However, as mentioned above, the MiCA Regulation itself does not define stablecoins, but instead creates two new discrete regulatory categories to cover the assets that are commonly defined as 'stablecoins', namely (i) asset-referenced tokens and (ii) e-money-tokens. These regulatory categories are distinguished by the external value that the asset is referenced to, hinting at the EU's attempt to regulate stablecoins through a nuanced and differentiated approach that is based on the risks posed by the relevant type of stablecoins. In this sense, two key challenges need to be considered further with regard to defining stablecoins within the scope of the MiCA Regulation.

First, establishing an exhaustive definition of 'stablecoins' under the regulatory purview of the MiCA Regulation within the definitions of asset-referenced tokens and e-money

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[55] See ibid art 2(4).
[56] ibid recital 9. Financial instruments are defined in MiFID II, art 4(1)(15).
[57] MiCAR, art 2(5).
[58] ibid recital 66.
[59] ibid arts 17(1)(b)(ii), 18(2)(e).
[60] ibid art 97(1).
[61] ibid recitals 5 and 96.

tokens is challenging due to the complexity and constant ongoing technological evolution of their structure and mechanisms, making attempts to regulate such assets akin to seeking to regulate a constantly moving target. This challenge extends beyond stablecoins and applies to all innovative regulatory objects in general. A possible solution to this includes defining regulatory categories using a technology-neutral approach that relies on characteristics that are independent of technology. This would provide certainty for some time.[62]

The MiCA Regulation adopts this approach by itself stressing the importance of 'technological neutrality'.[63] At the same time, the definition of crypto-assets that forms the basis of the definitions of asset-referenced and e-money tokens requires them to be able to be transferred and stored electronically using DLT or similar technologies. Hence, the understanding of technological neutrality under the MiCA Regulation is a wider one,[64] given that the MiCA Regulation only targets innovation based on DLT. In fact, the MiCA Regulation's understanding of technological neutrality with regard to stablecoins relates to the design and mechanism for maintaining a stable value, aimed at ensuring that all forms of 'stablecoins' are covered by the MiCA Regulation. The MiCA Regulation explicitly stresses this by designating the rules for asset-referenced tokens or e-money tokens as applicable, irrespective of how the issuer intends to design the crypto-asset, including the mechanism for maintaining a stable value, insofar as a crypto-asset falls within the definition of an asset-referenced token or e-money token.[65]

In addition to technological neutrality, expert bodies can be authorised to specify technical criteria, which thereby avoids the need for lengthy legislative processes to adapt definitions in an evolving context. Nonetheless, in such cases, a sufficient legal basis and legislative framework are essential for preserving the rule of law and democratic legitimacy.[66]

With regard to the regulation of 'stablecoins' under the MiCA Regulation, the regulation seeks to deal with the innovative nature of such assets by incorporating elements of technological neutrality and empowering the European Commission to adopt delegated acts.[67] This mechanism allows for the MiCA Regulation's framework to be adapted to market and technological developments, offering a balance between flexibility and a required legal basis.

A second challenge with regard to defining stablecoins relates to the more general attribution of the concept of 'stability'. In the EU, the perceived stability of stablecoins is treated cautiously, recognising that, while they may be more stable compared to other more volatile crypto-assets, this perception may be misleading.[68] The European Central Bank ('ECB') has since advocated for a change in terminology to shift the focus away from the issuer's promise of stability.[69] In fact, as noted above, the MiCA Regulation almost entirely

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[62] See the 'Howey test' developed by the US Supreme Court, defining the requirements to determine whether an 'investment contract' exists: *SEC v WJ Howey Co*, 328 US 293 (1946).

[63] MiCAR, recital 9.

[64] See similarly Philipp Maume, 'The Regulation on Markets in Crypto-Assets (MiCAR): Landmark Codification, or First Step of Many, or Both?' (2023) 20 European Company and Financial Law Review 243, 255.

[65] Recital 41 of the MiCA Regulation states that, should an algorithmic crypto-asset 'not aim to stabilise the value of the crypto-assets by referencing one or several assets', it nevertheless must comply with Title II of the MiCA Regulation.

[66] See the principles of democracy, in article 10 of the Treaty on European Union, and the rule of law, recognised in Case 294/83 *Parti écologiste 'Les Verts' v European Parliament* [1986] ECR 1339.

[67] In accordance with article 3(2) of the MiCA Regulation, '[t]he Commission shall adopt delegated acts in accordance with [a]rticle 139 to supplement this Regulation by further specifying technical elements of the definitions laid down in [article 3(1)], and to adjust those definitions to market developments and technological developments'.

[68] Lai T Hoang and Dirk G Baur, 'How Stable Are Stablecoins?' (2021) The European Journal of Finance <https://doi.org/10.1080/1351847X.2021.1949369> accessed 9 June 2024.

[69] ECB, *Stablecoins: Implications for Monetary Policy, Financial Stability, Market Infrastructure and Payments, and Banking Supervision in the Euro Area* (European Central Bank 2020) 31.

moves away from the concept of 'stablecoins' and regulates such assets by reference to new discrete regulatory categories of assets that do not reference any concept of 'stability'. In line with this, the MiCA Regulation mentions (algorithmic) stablecoins only once in a recital,[70] notably distancing itself from the term while acknowledging its existence. In the interest of more stringent investor protection, the labelling and marketing of assets as a 'stablecoin' could arguably undermine the requirement that marketing materials and the white paper relating to such assets be 'fair, clear and not misleading' and not contain any assertions as regards the future value of the stablecoin and its underlying value except for those prescribed by the MiCA Regulation itself.[71] Should the labelling of an asset as a 'stablecoin' and not as an asset-referenced or e-money token contravene these principles, the issuer may be held liable.[72]

Through these categories, the MiCA Regulation establishes a delineated regulatory perimeter for 'stablecoins', whilst refraining from recognising them as a standalone regulatory category or referencing their 'stable' nature. In the author's view, this highlights the MiCA Regulation's caution as to their actual stability and its risk-based approach relating to the referenced value in a broadly technological-neutral setting. Nevertheless, it is possible that the introduction of these new categories and definitions, which do not reference the term 'stablecoin', may potentially mislead non-expert investors. However, in the author's view, this seems to be unlikely, due to the descriptive nature of the definitions and additional guidance. Also, it is not improbable that the terms and categories chosen by the MiCA Regulation will be adopted widely and alter market practice. This is due to the so-called 'Brussels effect', the phenomenon that EU policy influences standards and terminology beyond its borders.[73]

IV. REGULATORY MITIGATION OF FINANCIAL STABILITY RISKS AS A PREREQUISITE FOR AN INNOVATIVE MARKET

The highly regulated nature of the financial sector stems from the lessons learnt as a result of successive financial crises.[74] The task of financial regulation is thus to prevent and correct market failures and crises. To this end, financial regulation traditionally pursues three key objectives: (i) maintaining financial stability; (ii) advancing investor protection; and (iii) ensuring market efficiency.[75] Despite the emphasis on fostering innovation and an internationally-competitive, digital single market, it is crucial not to overlook these general objectives. This is because maintaining financial stability is undoubtedly a fundamental prerequisite to creating an innovative and sustainable market, in particular due to the fact that (global) stablecoins may pose risks to financial stability.[76]

Considering the promotion of innovation and market efficiency, the risk-based regulatory approach proposed by the MiCA Regulation appears to be an appropriate means of achieving this (Section IV.A). This approach employs tried and tested methods from other pieces of EU financial regulation to instil confidence in the market, particularly in the light of past turbulence in the crypto sector (Section IV.B).

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[70] MiCAR, recital 41.
[71] For asset-referenced tokens, see ibid arts 19(2)–(5), 26, 29(1)(b). For e-money tokens, see arts 51(2)–(5), 53(1)(b).
[72] ibid arts 26, 52.
[73] Anu Bradford, *The Brussels Effect: How the European Union Rules the World* (OUP 2020).
[74] Lucia Quaglia, 'Financial Regulation and Supervision in the European Union after the Crisis' (2013) 16 Journal of Economic Policy Reform 17.
[75] John Armour and others, *Principles of Financial Regulation* (OUP 2016) 116.
[76] Steven L Schwarcz, 'Regulating Digital Currencies: Towards an Analytical Framework' (2021) 102 Boston University Law Review 1037, 1062.

A. A RISK-BASED APPROACH IN VIEW OF MULTI-LEVEL SYSTEMIC RISK

Libra initially garnered attention, not due to posing an immediate threat to financial market stability, but rather due to concerns about monetary sovereignty, which is often deemed to be within the legislative prerogative of nation-states and the supervisory purview of central banks. France and Germany emphasised that no private company could 'claim [the] monetary power' inherent to state sovereignty.[77] In their view, the sovereign state has sole power to issue and regulate the money in circulation on its territory.[78] In the EU, countries using the Euro as their official currency have delegated this monetary sovereignty to the EU.[79] The G7 Working Group also extensively examined the monetary policy implications arising from the advent of global stablecoins issued by private non-state actors. Among the concerns raised by the G7 were the potential weakening of domestic monetary policy, uncontrollable substitution effects, capital outflows, and the potential adverse impacts on real economic activity.[80]

Although monetary policy risks and risks to financial stability cannot be strictly separated, regulatory attention has primarily focused on the latter. Although regulatory responses suggest an imminent threat, the EU legislator still considers stablecoins a marginal phenomenon with limited actual impact on financial stability. However, there are exceptions, especially for stablecoins backed by real assets or fiat currencies, which could potentially cause vulnerabilities with regard to financial stability.[81] This observation holds true even when considering the turmoil in the crypto-asset market, such as in the cases of FTX[82] or Terra-Luna,[83] with the risk of contagion arising from failures within the crypto sector.[84]

Considering the potential impact of stablecoins through their continuously growing market capitalisation, the rise of decentralised finance applications and their critical nature in crypto-asset trading in general,[85] there is a recognised risk of the knock-on effects of any failure of a global stablecoin on financial markets and monetary policy.[86]

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[77] Ministry of Economics and Finance (France) and Federal Ministry of Finance (Germany), 'Joint Statement on Libra' (13 September 2019) <https://www.politico.eu/wp-content/uploads/2019/09/Joint-statement-on-Libra-final.pdf> accessed 23 February 2024.

[78] See for example Charles Proctor, *Mann on the Legal Aspect of Money* (7th edn, OUP 2012) 525.

[79] See Treaty on the Functioning of the European Union ('TFEU'), art 133.

[80] G7 Working Group on Stablecoins (n 26) 11.

[81] Commission, 'Commission Staff Working Document' (n 41) 19, 20.

[82] Darreonna Davis, 'What Happened To FTX? The Crypto Exchange Fund's Collapse Explained.' (*Forbe*s, 2 June 2023) <https://www.forbes.com/sites/darreonnadavis/2023/06/02/what-happened-to-ftx-the-crypto-exchange-funds-collapse-explained/> accessed 23 February 2024.

[83] Antonio Briola and others, 'Anatomy of a Stablecoin's Failure: The Terra-Luna Case' (2023) 51 Finance Research Letters <https://doi.org/10.1016/j.frl.2022.103358> accessed 9 June 2024.

[84] David Evans, 'Don't Let Crypto Hype Deter Tough Stablecoins Regs' (*Oxford Business Law Blog*, 18 October 2022) <https://blogs.law.ox.ac.uk/oblb/blog-post/2022/10/dont-let-crypto-hype-deter-tough-stablecoins-regs> accessed 23 February 2024.

[85] Their market capitalisation has risen to a market capitalisation of more than USD 125 billion: Cristina Polizu and others, 'Stablecoins: A Deep Dive into Valuation and Depegging' (*S&P Global*, 7 September 2023) <https://www.spglobal.com/en/research-insights/featured/special-editorial/stablecoins-a-deep-dive-into-valuation-and-depegging> accessed 23 February 2024. See further Mitsu Adachi and others, 'Stablecoins' Role in Crypto and Beyond: Functions, Risks and Policy' (*ECB Macroprudential Bulletin*, 2022) <https://www.ecb.europa.eu/pub/financial-stability/macroprudential-bulletin/html/ecb.mpbu202207_2~836f682ed7.en.html> accessed 23 February 2024.

[86] Elizabeth McCaul, 'Mind the Gap: We Need Better Oversight of Crypto Activities' (*ECB The Supervision Blog*, 5 April 2023) <https://www.bankingsupervision.europa.eu/press/blog/2023/html/ssm.blog230405~03fd3d664f.en.html> accessed 23 February 2024.

A global stablecoin poses a unique risk to financial stability with regard to liquidity if such a stablecoin loses its peg to the referenced value[87] and this in turn triggers large-scale redemption requests by investors. The MiCA Regulation provides such redemption rights,[88] which generate market confidence, but may trigger runs in cases of distress—a risk that increases, the stronger the redemption rights are.[89] Although issuers of stablecoins need to manage reserves of fiat currency,[90] widespread redemption requests could lead to a 'liquidation of [the] reserve assets' and have a negative effect on the broader financial system.[91]

Further potential for systemic risk stems from the perceived stability of stablecoins, which draw money out of the centralised financial systems and into decentralised structures. This in turn limits the influence of monetary policy and other measures to ensure financial stability. The increasing risk of this can be seen through the emergence of stablecoins as a store of value, which the MiCA Regulation explicitly tries to prevent, by prohibiting issuers and service providers from granting interest to stablecoin holders.[92] Moreover, stablecoins are increasingly seen as a means to mitigate the volatility of other crypto-assets. However, 'issuers may face a shortfall of high-quality reserves' and a 'liquidity mismatch' when facing high demand.[93]

In addition, growing interest by traditional financial market participants in stablecoins[94] is likely to increase exposure and interconnections between such assets and the traditional financial system.[95] These concerns have been recognised by the Basel Committee on Banking Supervision ('BCBS'), which recently issued a standard on capital requirements for banks' direct exposures to crypto-assets.[96] This standard is to be transposed into EU law by 1 January, 2025; however, the ECB has expressed its expectation that the standard will be taken into account prior to this date.[97] Under this framework, stablecoins with effective stabilisation mechanisms, as defined by the standard, are subject to capital requirements based on the risk weights of the underlying referenced assets, as set out in the Basel Framework. By contrast, other stablecoins are subject to a capital treatment with a risk weight of 1250 per cent with minimal exceptions and an exposure limit.

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[87] On the risk of de-pegging and for an analysis of such events, see n 85.

[88] MiCAR, arts 39, 49.

[89] Edoardo D Martino, 'Monetary Sovereignty in the Digital Era. The Law & Macroeconomics of Digital Private Money' (2024) 52 Computer Law & Security Review <https://doi.org/10.1016/j.clsr.2023.105909> accessed 9 June 2024.

[90] MiCAR, art 36 (applicable to e-money tokens in accordance with article 58(1)(a)).

[91] Adachi and others, 'Stablecoins' Role in Crypto and Beyond' (n 85).

[92] See MiCAR, arts 40, 50; recitals 58, 68.

[93] Martino, 'Monetary Sovereignty in the Digital Era' (n 89).

[94] The use of DLT by banks has so far been quite limited: see ECB Banking Supervision, 'Take-Aways from the Horizontal Assessment of the Survey on Digital Transformation and the Use of Fintech' (15 February 2023) <https://www.bankingsupervision.europa.eu/ecb/pub/pdf/Takeaways_horizontal_assessment˜de65261ad0.en.pdf> accessed 9 June 2024. However Société Générale and Deutsche Bank have recently launched their own stablecoin projects: see Nikou Asgari, 'Société Générale to Become First Big Bank to List a Stablecoin' *Financial Times* (London, 6 December 2023) <https://www.ft.com/content/cd733a7c-2c74-412f-b234-6f495c118cc6> accessed 23 February 2024; Wahid Pessarlay, 'Deutsche Bank's DWS Launches EUR Stablecoin Launch via AllUnity' (*CoinGeek*, 23 December 2023) <https://coingeek.com/deutsche-bank-dws-launches-eur-stablecoin-launch-via-allunity/> accessed 23 February 2024.

[95] Adachi and others, 'Stablecoins' Role in Crypto and Beyond' (n 85); Martino, 'Monetary Sovereignty in the Digital Era' (n 89).

[96] BCBS, *Prudential Treatment of Cryptoasset Exposures* (BIS 2022).

[97] ECB, 'Crypto-Assets: A New Standard for Banks' (*ECB Supervision Newsletter*, 15 February 2023) <https://www.bankingsupervision.europa.eu/press/publications/newsletter/2023/html/ssm.nl230215_1.en.html> accessed 23 February 2024.

The MiCA Regulation itself reacts to these challenges with a risk- and activity-based approach, where activities associated with higher risks are subjected to stricter regulatory requirements.[98] In this sense, the MiCA Regulation incorporates different requirements for issuers of e-money tokens and asset-referenced tokens and introduces further rules for so-called significant stablecoins in line with their respective risks.

Risk-based financial regulation is favoured by some for its ability to prioritise regulatory resources, allowing for a nuanced and proportionate response to specific risks.[99] From the standpoint of protecting fundamental freedoms and rights, this approach may naturally be considered less intrusive compared to blanket prohibitions.[100] Given the dual objectives of creating an attractive market and carefully managing risks, this appears to be a suitable approach.[101]

First, there is stratification concerning the authorisation required to issue stablecoins. Whereas asset-referenced tokens can be issued by any legal entity established in the EU following authorisation under the MiCA Regulation, e-money tokens can only be issued by authorised credit or e-money institutions.[102] This significantly reduces the number of potential issuers and, especially, smaller market participants who may have issued e-money tokens in the past, but lack and do not strive to obtain authorisation as credit or e-money institutions and so cannot issue e-money tokens under the MiCA Regulation.[103] Nevertheless, this differentiated approach is, in the author's view, driven by the need for coherent requirements within the scope of application of the E-Money Directive and also, correspondingly, by the varying implications associated with the issuance of asset-referenced tokens, on the one hand, and e-money tokens, on the other.

For asset-referenced tokens, the MiCA Regulation's authorisation requirement seeks to introduce minimum standards as a prerequisite for approval to issue such tokens and reduces monitoring costs with more targeted supervision. It nevertheless imposes a regulatory burden through ongoing reporting, governance, and conduct requirements.[104] To alleviate this burden, the EU model exempts entities from the authorisation requirement for the issuance of asset-referenced tokens if the average outstanding amount of stablecoins over 12 months is less than EUR five million or if the stablecoins are exclusively intended for qualified investors.[105] However, even when no authorisation is required, a white paper must still be notified.[106]

In cases where these exemptions do not apply, the national competent authority ('NCA') of the home Member State must check compliance with suitability and governance requirements.[107] The NCA then issues a draft decision, subject to non-binding opinions from

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[98] See recital 9 of the MiCA Regulation, which refers to activity-based regulation under the principle 'same activities, same risks, same rules'. The Regulation hints at the choice of a risk-based approach in recitals 18, 20, 59, and 71.

[99] OECD, 'Recommendation of the Council on Regulatory Policy and Governance' (2012) 16 <https://www.oecd.org/governance/regulatory-policy/2012-recommendation.htm#> accessed 23 February 2024.

[100] Compare the initial reactions to Libra or the demand by the New York Prosecutor General, Letitia James, after a long investigation that Tether cease all commercial activity: Office of the New York State Attorney General, 'Attorney General James Secures Settlement Worth $2 Billion from Crypto Firm Genesis Global Capital for Defrauded Victims' (Letitia James, Press Release, 20 May 2024) <https://ag.ny.gov/press-release/2024/attorney-general-james-secures-settlement-worth-2-billion-crypto-firm-genesis> accessed 9 June 2024.

[101] Agata Ferreira, 'The Curious Case of Stablecoins—Balancing Risks and Rewards?' (2021) 24 Journal of International Economic Law 755, 774.

[102] MiCAR, art 48(1)(a).

[103] Maume (n 64) 268.

[104] See for example MiCAR, arts 22, 27, 34.

[105] ibid art 16(2).

[106] ibid.

[107] ibid arts 18, 20.

the EBA, the ESMA, the ECB, and, where applicable, the central banks of non-Euro Member States. The NCA can then approve or reject the application, considering these opinions.[108] Importantly however, the NCA is obligated to reject the application if the ECB or the relevant central bank of a non-Euro Member State issues a 'negative opinion' due to their perception that a particular stablecoin poses risks to the smooth functioning of 'payment systems, monetary policy transmission, or monetary sovereignty'.[109] This once again highlights the origin of the regulation as a tool to regulate and manage such risks, although it is questionable whether there is a loophole for administrative arbitrage due to the vague rejection criterion.[110] It also remains to be seen how this composite administrative procedure will play out in practice within the European multi-level system.

Secondly, the MiCA Regulation introduces a risk-based distinction between 'significant' and non-significant tokens, justified on the basis that, where such assets are 'used by a large number of holders', 'their use could raise specific challenges in terms of financial stability, monetary policy transmission or monetary sovereignty'.[111] The significance of an asset is determined by the EBA based on criteria prescribed in the MiCA Regulation.[112] These include inter alia, more than ten million holders, a market capitalisation of more than EUR five billion, a daily transaction volume of EUR 500 million or 2.5 million transactions. Some criteria, such as thresholds for the value of issued tokens, market capitalisation, or the number and value of transactions, are objective and measurable. However, criticism has been raised regarding their measurement at an individual company level rather than also at a consolidated group level.[113] Other criteria for categorising significant tokens are less clear and objective, such as integration within the financial system. Also, it has been argued that the fact that the relevant thresholds are set out in the MiCA Regulation, instead of delegated legislation, complicates future adjustment, should the thresholds prove to be inadequate or otherwise become outdated.[114]

Stablecoins that are categorised as 'significant' under these criteria are subject to stricter requirements. These include requiring issuers of 'significant' stablecoins to hold a higher amount of own funds, to adopt a remuneration and liquidity management policy, and to conduct regular liquidity stress tests.[115] In contrast to issuers of non-significant stablecoins, issuers of significant stablecoins are not supervised by NCAs, but rather are directly supervised by the EBA and other members of a supervisory college. These stricter rules are justified, given the specific challenges posed by significant stablecoins 'in terms of financial stability, monetary policy transmission or monetary sovereignty'.[116]

In any case, a functional and proportionate, risk-based approach requires accurate foresight to anticipate risks and their scope resulting from certain activities.[117] This requires data on, and an analysis of, risks beforehand to ensure appropriate regulatory decisions, but

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[108] For the assessment procedure, see ibid art 20.
[109] ibid art 21(4).
[110] Zetzsche, Buckley and Arner (n 21).
[111] MiCAR, recitals 59, 102.
[112] See ibid arts 43(1), 44, 56.
[113] McCaul (n 86).
[114] Maume (n 64) 267.
[115] See MiCAR, art 45 (applicable to e-money tokens in accordance with article 58(1)(a)).
[116] ibid recital 59.
[117] Sofia Ranchordás and Mattis van 't Schip, 'Future-Proofing Legislation for the Digital Age' (2019) University of Groningen Faculty of Law Research Paper 36/2019, 13 <https://papers.ssrn.com/abstract=3466161> accessed 23 February 2024.

also monitoring to supervise and adapt frameworks in the light of ensuring regulatory objectives in an effective and proportionate manner.

In this sense, the MiCA Regulation contains a mechanism to address market and technological developments. It mandates the European Commission, in close cooperation with the ESMA and the EBA, to prepare a report on crypto-asset market developments. This report shall be based on data collected by the ESMA and the EBA, incorporating input by the NCAs from authorised issuers and service providers.[118]

Still, the 'anticipatory' or 'predictive capacity' of the MiCA Regulation has been criticised,[119] as this mechanism will largely be based on 'input obtained from the market', in particular 'accumulated reporting data'.[120] Tools that enable real-time flow of information—for example, using regulatory technology ('RegTech'),[121] innovation hubs,[122] or regulatory sandboxes,[123] which could facilitate more anticipative, rather than reactive, regulation and supervision—are, however, not provided by the MiCA Regulation.[124]

B. THE ADAPTATION OF PRE-EXISTING MECHANISMS TO PROTECT MARKET CONFIDENCE

Risks to market confidence and market stability are not new. Lessons learnt in previous financial crises can be employed by leveraging tried and tested mechanisms from EU financial regulation, such as requirements for liquidity, governance, investor protection, and market integrity.[125] At the same time, for this approach to be effective, recent experiences with market turbulence, such as those observed with FTX or Terra-Luna in the US, must be taken into account, in order for these mechanisms to accommodate the specificities of stablecoins. This approach allows for a nuanced and adaptive regulatory response, which integrates the evolving nature of the market and the unique challenges posed by stablecoins.

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[118] MiCAR, arts 141, 142.

[119] Nikita Divissenko, 'Regulation of Crypto-Assets in the EU: Future-Proofing the Regulation of Innovation in Digital Finance' (2023) 8 European Papers 665, 683.

[120] ibid.

[121] 'RegTech' means 'any range of applications of technology-enabled innovation for regulatory, compliance and reporting requirements implemented by a regulated institution': EBA, 'EBA Analysis of RegTech in the EU Financial Sector' (EBA/REP/2021/17, June 2021) 5 <https://www.eba.europa.eu/sites/default/files/document_library/Publications/Reports/2021/1015484/EBA%20analysis%20of%20RegTech%20in%20the%20EU%20financial%20sector.pdf> accessed 23 February 2024. See for example RegTech solutions for white paper compliance: Carolina Camassa, 'Legal NLP Meets MiCAR: Advancing the Analysis of Crypto White Papers' (2023) <http://arxiv.org/abs/2310.10333> accessed 23 February 2024.

[122] 'Innovation hubs' are institutional arrangements allowing regulated or unregulated entities to engage with the NCA in the discussion of FinTech-related issues or to 'seek clarification on the conformity of business models with the regulatory framework or on regulatory/licensing requirements': EBA, 'Discussion Paper on the EBA's Approach to Financial Technology (FinTech)' (EBA/DP/2017/02, 4 August 2017) 7, fn 7 <https://extranet.eba.europa.eu/sites/default/documents/files/documents/10180/1919160/7a1b9cda-10ad-4315-91ce-d798230ebd84/EBA%20Discussion%20Paper%20on%20Fintech%20%28EBA-DP-2017-02%29.pdf?retry=1> accessed 23 February 2024.

[123] 'Regulatory sandboxes' are 'a controlled space in which [financial institutions and non-financial firms] can test innovative FinTech solutions with the support of an authority for a limited period of time, allowing them to validate and test their business model in a safe environment': ibid fn 8.

[124] For a more detailed discussion, see Divissenko (n 119) 682.

[125] ECB, *Stablecoins* (n 69) 17.

Traditionally, market failures carry the risk of a loss of trust, leading to bank runs and liquidity shortages.[126] The liquidity risk, highlighted in the section above, materialised after the collapse of Luna, a relatively small algorithmic stablecoin, when the largest stablecoin issuer, Tether, faced a run and USDT lost its peg to the US dollar.[127] The MiCA Regulation aims to mitigate this risk through obligations related to reserves and redemption rights. It grants holders of e-money and asset-referenced tokens the right to redemption at all times and requires issuers to define conditions for exercising this right.[128] Reserve requirements are essential to mitigate the risk resulting from these redemption rights, as highlighted above.[129] Issuers of asset-referenced tokens and e-money tokens must hold at least 30 per cent of reserves in the form of the reference currency,[130] which must correspond to the 'aggregate value' of the claims of stablecoin holders against the issuer.[131] These reserve assets must be held in custody by a third party.[132] The size and composition of reserve assets will be determined by the Commission, based on draft regulatory standards developed by the EBA.[133] The substantial reserve ratio incentivises providers to invest reserves for higher yields to maintain a profitable margin. This is counterbalanced by own funds requirements that can be adjusted by authorities.[134]

Nevertheless, issuers are granted a certain degree of flexibility concerning the quality and use of reserves, as well as the structure of redemption rights. Issuers may, for example, invest their reserves in liquid assets,[135] which permits some qualitative asset transformation. Despite this flexibility, there remains a question of whether these requirements are adequate to prevent a run in the event of 'a liquidity shock'.[136] For such cases, issuers must prepare a recovery plan as well as a redemption plan, in advance.[137] Additionally, the supervising authority can also impose measures to aid stability, for example by barring redemption claims.[138]

To avert crises, governance standards play a crucial role in minimising operational risks, covering aspects such as organisational structures, procedures, and strategies for dealing with these risks. The collapse of the crypto trading platform, FTX, in the US underscored the importance of governance standards for risk management, as FTX violated fundamental practices of corporate governance and risk management. For instance, issues related to the 'segregation of [client] funds' and 'requirements for external audits' were apparent.[139] The MiCA Regulation addresses these by

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[126] Mitsutoshi Adachi and others, 'A Regulatory and Financial Stability Perspective on Global Stablecoins' (*ECB Macroprudential Bulletin*, 2020) <https://www.ecb.europa.eu/pub/financial-stability/macroprudential-bulletin/html/ecb.mpbu202005_1~3e9ac10eb1.en.html> accessed 23 February 2024.

[127] Briola and others (n 83).

[128] MiCAR, arts 39, 49.

[129] On the substantial nature of reliable reserves, see IOSCO Board, 'Policy Recommendations for Crypto and Digital Asset Markets' (FR11/2023, 16 November 2023) 24, 70 <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD747.pdf> accessed 9 June 2024.

[130] MiCAR, art 36(4)(d) (applicable to e-money tokens in accordance with article 58(1)(a)).

[131] ibid art 36(7) (applicable to e-money tokens in accordance with article 58(1)(a)).

[132] ibid art 37 (applicable to e-money tokens in accordance with article 58(1)(a)).

[133] ibid art 36(4).

[134] See ibid art 35. Articles 35(2), (3) and (5) of the MiCA Regulation are applicable to e-money tokens in accordance with article 58(1)(b).

[135] ibid art 38 (applicable to e-money tokens in accordance with article 58(1)(a)).

[136] Edoardo D Martino, 'Regulating Stablecoins as Private Money Between Liquidity and Safety: The Case of the EU "Market in Crypto Asset" (MiCA) Regulation' (2022) Amsterdam Law School Research Paper No 2022-27, 43 <https://papers.ssrn.com/abstract=4203885> accessed 23 February 2024.

[137] MiCAR, arts 46, 47, 55.

[138] ibid art 46(4) (applicable, *mutatis mutandis*, to e-money tokens in accordance with article 55).

[139] McCaul (n 86).

imposing governance obligations on issuers of asset-referenced tokens[140] and service providers,[141] emphasising the essential nature of internal control mechanisms and effective procedures for risk management. Additionally, the MiCA Regulation stipulates further rules regarding information, transparency, and the conduct of business, which largely correspond to the provisions of MiFID II.[142]

Similarly, the rules for crypto-asset service providers reflect those provided by MiFID II. Crypto-asset service providers are defined as 'a legal person or other undertaking whose occupation or business is the provision of one or more crypto-asset services to clients on a professional basis' and who is authorised to provide crypto-asset services under the MiCA Regulation.[143] Due to the similarity of the activities of crypto-asset service providers under the MiCA Regulation and those of investment firms under MiFID II,[144] the principle of equivalence applies. Under this principle, an investment firm authorised under MiFID II in respect of a specific investment service or an authorised credit institution can perform the equivalent crypto-asset services,[145] requiring only a notification and not full authorisation under the MiCA Regulation.[146]

Analogous to financial instruments regulated by MiFID II, a market abuse regime has been introduced for crypto-assets to prevent mispricing and market disruption, thereby safeguarding market integrity and averting actions that could undermine investor confidence.[147] These rules closely reflect those contained in the Market Abuse Regulation.[148]

Another crucial aspect for maintaining confidence in the market is investor protection and market integrity.[149] The European regulatory model employs both traditional administrative law[150] and regulatory private law.[151] Concerning stablecoins, a key element of investor protection is the obligation to prepare a white paper.[152] White papers, similar to the prospectus for publicly offered securities under the Prospectus Regulation,[153] serve as an essential tool for reducing information asymmetries between issuers and investors. While white papers of asset-referenced token issuers must be authorised by the competent authority of their home Member State, white papers of e-

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[140] MiCAR, art 34.

[141] ibid art 68.

[142] See, in particular, MiCAR, arts 27 (which introduces certain rules of conduct), 29, 30 (which regulate marketing communication and the provision of information), 31 (which obliges the issuer to put in place a procedure for dealing with complaints), 32 (which lays down requirements for the prevention, identification, management, and settlement of conflicts of interest).

[143] ibid art 3(1)(15).

[144] The activities listed in articles 76–82 of the MiCA Regulation mirror the activities regulated under MiFID II, with the exception of the new activity of 'providing custody and administration of crypto-assets on behalf of clients' (i.e. crypto-custody or wallet-as-a-service) under article 75 of the MiCA Regulation.

[145] Explicitly listed in MiCAR, art 60(3).

[146] ibid art 60.

[147] ibid Title VI.

[148] Regulation (EU) No 596/2014 of the European Parliament and of the Council of 16 April 2014 on market abuse (market abuse regulation) and repealing Directive 2003/6/EC of the European Parliament and of the Council and Commission Directives 2003/124/EC, 2003/125/EC and 2004/72/EC [2014] OJ L173/1 ('Market Abuse Regulation').

[149] Marnix Wallinga, *EU Investor Protection Regulation and Liability for Investment Losses: A Comparative Analysis of the Interplay between MiFID & MiFID II and Private Law* (Springer 2020).

[150] Hans-W Micklitz, 'Administrative Enforcement of European Private Law' in Roger Brownsword and others (eds), *The Foundations of European Private Law* (Hart Publishing 2011) 564.

[151] See Hans-W Micklitz, 'The Visible Hand of European Regulatory Private Law—The Transformation of European Private Law from Autonomy to Functionalism in Competition and Regulation' (2009) 28 Yearbook of European Law 3.

[152] On the importance of white papers, see MiCAR, recitals 43, 69.

[153] Regulation (EU) 2017/1129 of the European Parliament and of the Council of 14 June 2017 on the prospectus to be published when securities are offered to the public or admitted to trading on a regulated market, and repealing Directive 2003/71/EC [2017] OJ L168/12 ('Prospectus Regulation'), art 1.

money token issuers only need to be notified.[154] The European Commission estimates that the total costs for issuers range from EUR 35,000 to 75,000 per white paper,[155] which seems proportionate to the issuer's risks and responsibilities, avoiding an insurmountable barrier to market entry.

Investor protection and market integrity are further guarded by express provisions on private enforcement in addition to administrative penalties. As mentioned above, in the event of incomplete, dishonest, or misleading information in white papers, the issuer may be held liable.[156] This is an important means of enforcing and sustaining confidence in the market, through shifting power to investors themselves. In this sense, it is advantageous that the MiCA Regulation provides for such a legal basis in addition to Member State provisions on civil liability. The necessity of effective regulation and enforcement in this regard is demonstrated by the case of Tether, the issuer of the stablecoin, USDT, which misrepresented the status of its reserves by falsely claiming that USDT was 100 per cent backed by US dollars.[157]

By drawing on provisions contained within existing EU regulation, the MiCA Regulation strives to provide clarity for a sector in relation to a category of assets that were understandably not anticipated during the adoption of these existing acts. In the interest of creating the first comprehensive framework to regulate stablecoins and creating a competitive market, the EU has also been aided by copying from these established pieces of EU financial regulation instead of developing an entirely new regulatory model from scratch.[158] The choice of creating comprehensive legislation instead of amending each of these pieces of legislation, although likely feasible from a regulatory perspective,[159] aligns with the EU's policy interest to promote innovation through incentives as a clear policy signal towards issuers and providers to conduct their business in the EU, thus promoting the competitiveness of the single market.

The MiCA Regulation tries to ensure effective supervision and the success of claims by excluding fully decentralised constructs without an identifiable issuer or intermediary from its scope. In cases of partial decentralisation, however, issuers and service providers remain subject to the rules of the MiCA Regulation.[160] Still, concerns have been raised by some as to the 'delineation' between 'fully decentralised' and 'partially decentralised' crypto-asset services in practice.[161]

Correspondingly, effective supervision and the success of any potential claims are aided by the MiCA Regulation's requirement that an issuer of asset-money tokens must be established in an EU Member State,[162] whereas for e-money tokens, similar rules for authorised credit and e-money institutions apply. Crypto-asset service providers are required to have a registered office in an EU Member State in which they carry out substantive business activities, to 'have their place of effective management' in the EU, and to have at least one director be an EU resident.[163]

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[154] See MiCAR, arts 20(1), 17(1)(a), 48(1)(b).

[155] Commission, 'Commission Staff Working Document' (n 41) 62.

[156] MiCAR, arts 26, 52.

[157] Office of the New York State Attorney General, 'Attorney General James Directs Unregistered Crypto Lending Platforms to Cease Operations in New York, Announces Additional Investigations' (Letitia James, Press Release, 18 October 2021) <https://ag.ny.gov/press-release/2021/attorney-general-james-directs-unregistered-crypto-lending-platforms-cease> accessed 23 February 2024.

[158] See in this sense Maume (n 64) 250.

[159] See Karel Lannoo, 'Regulating Crypto and Cyberware in the EU' (2021) ECMI Policy Brief no 31, 11 <https://www.ecmi.eu/sites/default/files/ecmi_pb_no_31_kl_regulating_crypto_and_cyberware_in_the_eu.pdf> accessed 23 February 2024.

[160] MiCAR, recital 22.

[161] Maume (n 64) 253.

[162] MiCAR, art 16(1)(a).

[163] ibid art 59(2). See also recital 74, which states that 'effective management' of activities in the Union is essential 'in order to avoid undermining effective prudential supervision and to ensure the enforcement of requirements under this

Still driven by investor protection concerns, the territorial scope of the MiCA Regulation extends to all persons 'engaged in the issuance, [the] offer to the public [or the] admission to trading of crypto-assets' or 'services related to crypto-assets in the Union'.[164] This mirrors the territorial scope stipulated in MiFID II[165] and the Prospectus Regulation.[166] Also, similar to other legal regimes, crypto-asset services from providers in third countries are only permitted at the 'exclusive initiative' of the client.[167]

Due to their inherently borderless nature and potential reach, the supervision of stablecoins remains a significant challenge, demanding supervisory cooperation and a coherent regulatory approach to avoid fragmentation and regulatory arbitrage. This is especially important due to the global nature of risks to financial stability as well as to investors.

Instances like the case of FTX underscore the consequences of the lack of consolidated supervision for vertically integrated and globally active entities in different jurisdictions. Consequently, alongside the MiCA Regulation, the establishment of an effective framework for cross-border cooperation is essential.[168] It is to be welcomed that supervisory colleges for major stablecoins include authorities from non-Member State countries, fostering collaboration.[169]

Furthermore, the decentralised nature of stablecoins allows for high cross-market and cross-border dynamism with limited associated costs. Consequently, to avoid regulatory-driven fragmentation incentivising regulatory arbitrage, and to ensure high standards and the competitiveness of the EU single market, the EU must follow through on its promise to support international efforts to establish common standards. The MiCA Regulation highlights the EU's mandate to support international efforts to promote policy 'convergence' on the treatment of stablecoins and other crypto-assets 'through international organisations or bodies', such as the FSB, the BCBS, and the Financial Action Task Force ('FATF').[170] Most recently, policy recommendations have been issued by the FSB on the regulation, supervision, and oversight of global stablecoin arrangements,[171] as well as by the International Organization of Securities Commissions ('IOSCO') on crypto and digital asset markets, with specific recommendations dedicated to stablecoins.[172]

Moreover, the MiCA Regulation itself promotes the conclusion of 'administrative agreements on the exchange of information' between the EBA and third countries,[173] as well as on other forms of cooperation with authorities, including those in third countries where an issuer of significant stablecoins 'engages in activities' not covered by the MiCA Regulation.[174] These provisions convey a mandate to promote a convergence of standards and to strive for cross-jurisdictional enforcement. However, this requires a common understanding of minimum standards, which will be

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Regulation'. Recital 74 also states that '[r]egular close direct contact between supervisors and the responsible management of crypto-asset service providers should be an essential element of such supervision'.
[164] ibid art 2(1).
[165] MiFID II, art 1(1).
[166] Prospectus Regulation, art 1(1).
[167] MiCAR, art 61.
[168] See, in this sense, ibid art 98.
[169] ibid art 119(2)(m).
[170] ibid recital 8.
[171] FSB, 'High-Level Recommendations for the Regulation, Supervision and Oversight of Global Stablecoin Arrangements' (17 July 2023) <https://www.fsb.org/2023/07/high-level-recommendations-for-the-regulation-supervision-and-oversight-of-global-stablecoin-arrangements-final-report/> accessed 23 February 2024.
[172] IOSCO Board (n 129) 8, 23, 36, 68.
[173] MiCAR, art 126.
[174] ibid art 128.

influenced by other jurisdictions' regulatory models to attract issuers and service providers. Recently, movements in the direction of regulatory regimes for stablecoins have occurred in the UK[175] and in the US.[176] Consequently, time will tell how these regimes will compare to the MiCA Regulation and how they will influence regulatory standards in the light of regulatory market competition.[177]

V. CONCLUSION

From a theoretical perspective, the EU regulatory approach to addressing the risks and challenges associated with stablecoins, in the author's view, establishes a legally certain framework that appropriately tackles potential threats to financial stability and investors. The EU's response also conveys a political message, highlighting the EU's intention to foster innovation and to enhance the competitiveness of the EU single market in the crypto sector. In this sense, the design of the MiCA Regulation builds on past experiences of risks and crises by adapting existing regulatory tools to encompass stablecoins and other crypto-assets in a comprehensive legal framework.

From a practical point of view, the long-term sustainability of the EU's regulatory model and market competitiveness in the global crypto sector may be questioned. Although the MiCA Regulation has successfully convinced crypto service providers to engage in innovative activities from within the EU single market, even before entering into force, its long-term ability to do so is unclear. In the author's view, it is uncertain whether these recent market movements stem solely from the lack of comprehensive legal frameworks in other jurisdictions, or whether the MiCA Regulation has the genuine potential to serve as a long-term, attractive regulatory environment.

While the MiCA Regulation has garnered support, it remains to be seen whether other countries will adopt similar regulatory frameworks, in the light of the 'Brussels effect'. Alternatively, it is conceivable that other jurisdictions may respond with more attractive regulatory measures, including favourable tax policies not covered by the MiCA Regulation. Due to the decentralised nature of the crypto industry, the risk of regulatory arbitrage is considerable. This makes international cooperation and common standards essential to ensure the effectiveness of the MiCA Regulation's objectives. As a consequence, this preserves the global competitiveness of the single market by promoting innovation whilst maintaining high standards in the interest of financial stability and investor protection.

A specific concern that remains, especially with regard to the trustworthiness and attractiveness of the stablecoin and crypto-asset market, is the link between these assets and money laundering or terrorist financing.[178] EU regulators and supervisors are increasingly fo-

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[175] HM Treasury set out a phased approach requiring firms conducting relevant activities to obtain FCA authorisation under the Financial Services and Markets Act 2000, first introducing fiat-backed stablecoins 'into the regulatory perimeter' and later a broader set of cryptoassets: see HM Treasury, *Future Financial Services Regulatory Regime for Cryptoassets: Response to the Consultation and Call for Evidence* (HM Treasury 2023) 27.

[176] The House Financial Services Committee reported multiple pieces of cryptocurrency legislation to the House of Representatives for consideration that would establish a stablecoin regulatory framework: see Financial Services Committee, 'House Financial Services Committee Reports Digital Asset, ESG Legislation to Full House for Consideration' (Press Release, 27 July 2023) <https://financialservices.house.gov/news/documentsingle.aspx?DocumentID=408944> accessed 23 February 2024.

[177] Iris HY Chiu, 'Decrypting the Signs of Regulatory Competition in Regulating Cryptoassets' (2020) 7 European Journal of Comparative Law and Governance 297; Lannoo (n 159).

[178] MiCAR recognises this risk in recital 77.

cusing on this issue. For instance, the EBA extended its Anti-Money Laundering and Countering the Financing of Terrorism supervision guidelines to crypto-asset service providers[179] and published guidelines aimed at service providers on preventing such risks.[180] At the same time, further issues pertain, such as with regard to taxation and aspects of environmental sustainability, the latter only having been briefly addressed towards the end of the legislative process.[181] It thus remains to be seen how the implementation of the MiCA Regulation by competent authorities will be handled and how the market will develop in practice.

To remain effective in the light of developments, the MiCA Regulation contains a built-in revision mechanism, requiring the Commission to present a report on the 'latest developments' in crypto-assets within the 18-month period after the MiCA Regulation enters into force,[182] as well as an interim report on the application of the MiCA Regulation within 24 months, and a final report within 48 months.[183] Both must be accompanied, where appropriate, by a legislative proposal. This built-in overhaul mechanism mitigates the risks stemming from the swift adoption of the MiCA Regulation by enabling the Commission to react to developments in an innovative market and to adapt the legal framework accordingly.

Together with necessary clarifications through outstanding implementing measures and guidelines, this mechanism is crucial to ensure that the MiCA Regulation, as the pioneer framework on stablecoins, fulfils its promised objectives in a sustainable manner and is truly worth its weight in gold.

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[179] EBA, 'Final Report on Amending Guidelines on the Risk-Based Supervision under Article 48(10) of Directive (EU) 2015/849' (EBA/GL/2023/07, 27 November 2023) <https://www.eba.europa.eu/sites/default/files/2023-11/c0a72a30-19c6-4fbb-96cd-e2486ff0c8ec/Final%20report%20on%20guidelines%20amending%20the%20Risk%20Based%20Supervision%20Guidelines.pdf> accessed 23 February 2024.
[180] EBA, 'Guidelines Amending the ML/TF Risk Factors Guidelines' (EBA/GL/2024/01, 16 January 2024) <https://www.eba.europa.eu/sites/default/files/2024-01/a3e89f4f-fbf3-4bd6-9e07-35f3243555b3/Final%20Amending%20%20Guidelines%20on%20MLTF%20Risk%20Factors.pdf> accessed 23 February 2024.
[181] See for example MiCAR, recital 7; arts 19(1)(h), 19(11), 51(1)(g), 51(15), 66(5)–(6).
[182] ibid art 142.
[183] ibid art 140.