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I CONTRIBUTI SONO ANONIMIZZATI PRIMA DELL'INVIO AI VALUTATORI.

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UNIVERSITÀ DEGLI STUDI DI TRENTO, FACOLTÀ DI GIURISPRUDENZA, VIA VERDI 53,  
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## Problematic aspects of MiCAR

**SOMMARIO:** 1. Introduction. – 2. Issues of scope. – 2.1. “Crypto-assets”. – 2.2. Expected crypto-assets. – 2.3. Types of regulated crypto-assets. – 2.4. CASPs. – 2.5. General points. – 3. Issues of content. – 3.1. Credit institutions. – 3.2 The “disproportionate burden” provisions. – 3.3. The “store of value” and “means of exchange” provisions. – 3.4. An overriding strategy. – 4. Inherent issues. – 4.1 The cross-border dimension. – 4.2. Decentralisation. – 4.3. Anonymity. – 5. Conclusion.

### 1. Introduction.

The drafting quality of EU legislation is a sore subject. On the one hand, EU institutions repeatedly declare,<sup>1</sup> agree,<sup>2</sup> and communicate<sup>3</sup> their commitment to high-quality law-making. On the other, commentators consistently take a critical view, going as far as referring to “the obviously bad quality of EU legislative texts”.<sup>4</sup> This essay

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<sup>1</sup> See the European Commission’s Birmingham Declaration of 16 October 1992 (DOC/92/6) <[https://ec.europa.eu/commission/presscorner/detail/en/DOC\\_92\\_6](https://ec.europa.eu/commission/presscorner/detail/en/DOC_92_6)>; the Amsterdam Intergovernmental Conference’s Declaration on the quality of the drafting of Community legislation (No 39) <[http://data.europa.eu/eli/treaty/ams/fna\\_1/dcl\\_39/sign](http://data.europa.eu/eli/treaty/ams/fna_1/dcl_39/sign)>.

<sup>2</sup> See the Interinstitutional Agreement of 22 December 1998 on common guidelines for the quality of drafting of Community legislation <[https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:31999Y0317\(01\)](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:31999Y0317(01))>, the Interinstitutional Agreement of 16 December 2003 on better law-making <[https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32003Q1231\(01\)](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32003Q1231(01))>, and the Interinstitutional Agreement of 13 April 2016 on better law-making <<https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX%3A32016Q0512%2801%29>>.

<sup>3</sup> See the Commission’s communication of 12 December 2012 on Regulatory Fitness <<https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX:52012DC0746>>, its communication of 19 May 2015 on ‘Better regulation for better results’ <<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52015DC0215>>, its communication on ‘Better Regulation: Delivering better results for a stronger Union’ <<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52016DC0615>>, its communication on ‘Better regulation: taking stock and sustaining our commitment’ <<https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1582903615393&uri=CELEX:52019DC0178>>.

<sup>4</sup> H. XANTHAKI, *The Problem of Quality in EU Legislation: What on Earth is Really Wrong?*, (2001) 38 *Common Market Law Review*, 651, 667-74. Since, see H.

focuses on 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 OJ L150 (“MiCAR”), the culmination of a legislative effort which has lasted almost three years. During this time, the European Commission has been active to promote the quality of legislation, and in fact advertises the revamping of the “Have Your Say” portal, the establishment of the “One In, One Out” pilot project, and the revision of its “Better Regulation” agenda.<sup>5</sup>

Despite these efforts, the final version of MiCAR gives rise to three sorts of problems. One sort relates to the scope of MiCAR – that is, who and what is being regulated. In particular, there are instances in which MiCAR relies on blurry definitions and distinctions, engages in heavy-handed generalisations, and contains apparent lacunae without properly justifying them. These problems are primarily legalistic, or formal, or content-neutral in nature: they bear on the clarity and rationality of MiCAR – in other words, whether it is intelligible to a rational reader – and MiCAR’s shortcomings in this respect are problematic regardless of what the Regulation then says about the activities within its scope.

Another sort of problem pertains to the content of MiCAR – that is, the substantive merits of the rules laid down. Here, the main issue is one of consistency, both in relation to specific provisions and to the Regulation as a whole. MiCAR’s treatment of asset-referenced tokens and e-money tokens, for example, is in some respects internally inconsistent and out of step with MiCAR’s treatment of the other crypto-assets which fall within its scope. More generally, MiCAR has been criticised both on the basis that it is too lenient towards crypto markets and on the basis that it is unduly burdensome; these responses

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XANTHAKI, *European Union Legislative Quality After the Lisbon Treaty: The Challenges of Smart Regulation* (2014) 35 *Statute Law Review* 66-80; L. DI DONATO, *The Regulatory Quality in the European Union*, in *Amministrazione in Cammino* (2 December 2015) <<https://www.amministrazioneincammino.luiss.it/2015/12/02/the-regulatory-quality-in-the-european-union/>> 8-9; K. GOMBOS, *EU Law viewed through the eyes of a national judge* (October 2018) <[https://ec.europa.eu/dgs/legal\\_service/seminars/20140703\\_gombos\\_speech\\_en.pdf](https://ec.europa.eu/dgs/legal_service/seminars/20140703_gombos_speech_en.pdf)> 5-9; E. GHIO, *Redefining Harmonisation: Lessons from EU Insolvency Law* (Elgar Publishing 2022) 18.

<sup>5</sup> <[https://commission.europa.eu/law/law-making-process/planning-and-proposing-law/better-regulation\\_en#documents](https://commission.europa.eu/law/law-making-process/planning-and-proposing-law/better-regulation_en#documents)>.



are difficult to reconcile with each other, and suggest that there are latent unresolved tensions at the heart of MiCAR. Indeed, the issue appears to be ultimately that MiCAR does not openly address the substantive controversies surrounding crypto-assets and, as a result, it is difficult to identify in MiCAR a single overarching strategy as to how crypto markets should be regulated.

The last sort of problem is inherent in MiCAR – that is, in the very idea of the EU regulating crypto-assets. Crypto markets are unique in their cross-border potential, their decentralising ethos, and their capacity for anonymity. In fact, MiCAR relies on the international dimension of crypto-assets – having been adopted under Art 114 TFEU – yet largely overlooks the international dimension in so far as it extends beyond the EU. More broadly, the EU legislature does not seem fully aware that it is attempting to regulate an industry deliberately designed to escape regulation. The result is a severely impaired regulatory regime.

This essay is not meant to be polemical, and its starting point is that setting out a comprehensive, coherent, and effective regulatory regime for markets in crypto-assets is very difficult. First, the crypto phenomenon is still taking shape, so is difficult to accurately define. Second, its consequences – and their desirability – are controversial issues, so devising a cogent regulatory strategy requires making difficult political choices. Third, this is a novel development, with peculiar features, so is difficult to manage with the regulatory tools hitherto developed. And these difficulties are only exacerbated by the EU legislature’s ambitious objective of “ensur[ing] that Union legislative acts on financial services are fit for the digital age, and contribute to a future-proof economy that works for people, including by enabling the use of innovative technologies”,<sup>6</sup> especially considering that the EU’s law-making competences are limited. In fact, it may well be that any sensible attempt at regulation, even if imperfect, is preferable to no regulation at all. Nevertheless, the overwhelming impression is that the EU legislature did not properly consider some key issues underlying its legislative efforts, such as what it means for a legislative measure to be “future-proof”, whether regulation should restrain or enhance crypto markets, and how to cope with the unique

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<sup>6</sup> Recital 1.

features of the crypto world. As a result, while MiCAR is in all likelihood a step in the right direction, it is still far from the finish line.

## 2. *Issues of scope.*

The scope of MiCAR has several moving parts. Its outermost scope is described in positive terms (what MiCAR regulates) as well as negative terms (what MiCAR does not regulate). On the positive side, the Regulation targets markets in crypto-assets and, for that purpose, offers a definition of “crypto-assets”. On the negative side, MiCAR identifies various categories of crypto-assets which it does not regulate. Within its outermost scope, MiCAR draws various internal distinctions, setting out different rules for the issuers of different types of crypto-assets. In addition, MiCAR identifies a number of “crypto-asset services” and lays down rules for their providers. For each moving part, there is significant slack and friction.

### 2.1. *“Crypto-assets”*

MiCAR’s foundational definition lies in Art 3(5): “‘crypto-asset’ means a digital representation of a value or of a right that is able to be transferred and stored electronically using distributed ledger technology or similar technology.”

The first part of this definition implies that crypto-assets lack a shared conceptual identity. If a crypto-asset is a representation of a right, the right must exist independently, and the digital aspect must in essence be a matter of form: it allows persons to acquire and alienate rights in novel ways, but nothing more. If, by contrast, a crypto-asset represents a value – and, for that reason, can be the subject-matter of legal rules – the digital element takes on a more constitutive character, creating a legal device where previously there was none.<sup>7</sup> This is the case, for example, for crypto-assets which represent an “external, non-intrinsic value attributed to a crypto-asset by the parties concerned or by market participants, meaning the value is subjective and based only

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<sup>7</sup> This distinction is not unique to the EU experience: see FINANCIAL MARKETS LAW COMMITTEE, *Taxonomical Approaches to Cryptoassets: Response to European Commission Consultation – Part I* (March 2020) para 2.3; Law Commission, *Digital Assets: Final Report* Law Com No 412 ix.

on the interest of the purchaser of the crypto-asset” – in other words, crypto-currencies.<sup>8</sup> Accordingly, different crypto-assets may have very different conceptual structures: firstly, because they need not represent pre-existing rights at all; secondly, because if they do represent a pre-existing right, there seem to be no restrictions on the sort of right – proprietary or personal, absolute or conditional, economic or not – which they can represent. The only element of commonality between all crypto-assets, and the foundation of MiCAR, is their technological dimension.

What is problematic is that the second part of Art 3(5) fails to provide a solid technological account of crypto-assets. By referring not only to distributed ledger technology (DLT), but to “similar technology” too, the EU’s definition introduces considerable uncertainty as to which technologies fall – and will fall – within the scope of MiCAR.<sup>9</sup> On a more substantive note, by regulating technologies not yet in existence, MiCAR risks laying down inappropriate rules: at its simplest, new technologies would be subject to the same rules as DLT, even though those new technologies would not have had the chance, like DLT has had, to mature. As a result, this drafting choice risks stymying innovation and imposing unequal barriers to market entry,<sup>10</sup> inconsistently with the draftsmen’s own undertakings.<sup>11</sup> Most concerningly, the draftsmen seem entirely oblivious to this risk, insisting that Art 3(5) should be interpreted “as widely as possible”.<sup>12</sup>

There are viable alternatives to Art 3(5) which, by drawing a narrower technological scope, seem more consistent with MiCAR’s objectives. The ESMA’s earlier advice, for example, states that “all crypto-assets utilise some form of DLT”, and clarifies that “DLT is built upon public-key cryptography”, so can thus identify the three essential pieces of information which all crypto-assets require, namely “the

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<sup>8</sup> Recital 2.

<sup>9</sup> European Central Bank, “Opinion of the European Central Bank of 19 February 2019 on a proposal for a regulation on Markets in Crypto-assets, and amending Directive (EU) 2019/1937” OJ C152/1 para 1.4.

<sup>10</sup> T. TOMCZAK, *Crypto-assets and crypto-assets’ subcategories under MiCA Regulation* (2022) 17 Capital Markets Law Journal 365, 367-69.

<sup>11</sup> See Explanatory Memorandum COM(2020) 593 2; Recital 4.

<sup>12</sup> Recital 16.

address, and the public and private key”.<sup>13</sup> Although some technical uncertainty might remain as to the precise limits of “public-key cryptography”, this uncertainty is far slimmer than MiCAR’s. Outside of continental Europe, s 69(4)(a) of the Financial Services and Markets Act (FSMA) 2023<sup>14</sup> takes an intermediate approach, admitting that the recording and storage of data may be supported by technologies other than DLT, but insisting, at least, that crypto-assets must be “cryptographically secured”. The EBA’s advice takes a similar view, save that it seems to drift even closer towards MiCAR: not only are “similar technologies” admitted, but the link between crypto-assets and cryptography appears weaker, in that the former must only “depend primarily” on the latter.<sup>15</sup> What it means for crypto-assets to “depend primarily” on cryptography is left unresolved, demonstrating the merits of the ESMA’s narrower and tidier definition.

## 2.2. *Excepted crypto-assets*

Under Art 2(4), certain crypto-assets are excepted from the scope of MiCAR on the basis that they are already subject to adequate regulation.<sup>16</sup> This is the case, most notably, for crypto-assets which constitute a financial instrument and, therefore, fall under MiFID II.<sup>17</sup> The problem is that ascertaining *ex ante* whether a crypto-asset amounts to a financial instrument – and, thus, which rules apply – is a complex exercise.

There are three reasons for this complexity. Firstly, commentators point out that MiFID II relies on relatively ambiguous categories such as “transferable securities” and “commodity derivatives” and, especially considering how widely crypto-assets can vary from one

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<sup>13</sup> ESMA, *Advice: Initial Coin Offerings and Crypto-Assets* (9 January 2019), paras 21-22.

<sup>14</sup> Amending s 417 of the Financial Services and Markets Act 2000.

<sup>15</sup> EBA, *Report with advice for the European Commission on Crypto-assets* (9 January 2019), para 16.

<sup>16</sup> See Recitals 3, 9, and 97.

<sup>17</sup> Directive 2014/65/EU OJ L173. See Arts 2(4)(a) and 3(49). Other legislative acts which displace MiCAR are Regulation (EC) No 883/2004 OJ L166, Regulation (EC) No 987/2009 OJ L284, Directive 2009/138/EC OJ L335, Directive 2014/49/EU OJ L173, Directive (EU) 2016/2341 OJ L354, Regulation (EU) 2017/2402 OJ L347, and Regulation (EU) 2019/1238 OJ L198.

another, and how rapidly the crypto landscape can change, the application of these legal categories must be case-by-case.<sup>18</sup> In this respect, there is a rather close analogy with the *Howey* test adopted by US securities law, which is similarly casuistic and, worryingly, has already proved contentious in the context of crypto-assets.<sup>19</sup> Secondly, there is an argument that the analysis is – or ought to be – contextual: whether a crypto-asset is a financial instrument depends – or ought to depend – not (only) on its intrinsic features, but (also) on whether it is issued through an initial coin offering or “farmed” under a DeFi smart

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<sup>18</sup> F. ANNUNZIATA, *Verso una disciplina europea delle cripto-attività. Riflessioni a margine della recente proposta della Commissione UE*, in DB Approfondimenti (October 2020) 6-10; E. NOBLE, *Crypto-assets—Overcoming Impediments to Scaling: A View from the EU*, in SSRN (14 October 2020) <<https://ssrn.com/abstract=3748343>> 6; D. ZETZSCHE-F. ANNUNZIATA-D. ARNER-R. BUCKLEY, *The Markets in Crypto-Assets regulation (MiCA) and the EU digital finance strategy*, in (2022) 16 Capital Markets Law Journal 203, 218-20; IMF, *Elements of Effective Policies for Crypto Assets* (4 January 2023) 8; AGENZIA DELLE ENTRATE, *Trattamento fiscale delle cripto-attività. Articolo 1, commi da 126 a 147, della legge 29 dicembre 2022, n. 197 (legge di bilancio 2023)*” Circolare N. 30/E (27 October 2023) 13-14. For a detailed explanation of how the MiFID II categories could be applied to crypto-assets – an issue beyond the scope of this paper – see D. BOREIKO-G FERRARINI-P. GIUDICI, *Blockchain Startups and Prospectus Regulation* (2019) 20 Eur Bus Org L Rev 665; F. ANNUNZIATA (fn 18); ZETZSCHE *et al* (fn 18); A. TINA,  *Mercati centralizzati, decentralizzati. Prospettive di inquadramento della DeFi nell’attuale orizzonte MiFID*, in (2022) *Osservatorio del diritto civile e commerciale*, special issue 41; M. CIAN, *La nozione di criptoattività nella prospettiva del MiCAR*, in (2022) *Osservatorio del diritto civile e commerciale*, special issue 59.

<sup>19</sup> On the test itself, see *SEC v Howey Co*, 328 U.S. 293 (1946); *SEC v Edwards*, 540 U.S. 389 (2004); G. GENSLER, *We’ve Seen This Story Before*, Remarks before the Piper Sandler Global Exchange & Fintech Conference (8 June 2023) <[https://www.sec.gov/news/speech/gensler-remarks-piper-sandler-060823#\\_ftn2](https://www.sec.gov/news/speech/gensler-remarks-piper-sandler-060823#_ftn2)>. On its application, see *SEC v Ripple* 2023 WL 4507900 (S.D.N.Y. July 13, 2023) and the responses it prompted: the SEC’s motion for leave to appeal, dated 9 August 2023 <<https://www.consumerfinancialserviceslawmonitor.com/wp-content/uploads/sites/880/2023/08/Ripple-Labs-SEC-letter.pdf>>; SEC, *Response to Supplemental Authority in Support of Defendants’ Motion to Dismiss*, in the *Terraform* dispute: <<https://assets.bwbx.io/documents/users/iqjWHBFdfxIU/raAgcBtaEU24/v0>>; *SEC v Terraform*, 2023 WL 4858299 (S.D.N.Y. July 31, 2023), 40-41; M. DONOVAN, *Ripple Effect: The Sec’s Major Questions Doctrine Problem*, in (2023) 91 *Fordham LR*, 2309.

contract.<sup>20</sup> But, if this argument is accepted, what happens to a crypto-asset when, after arising in a financial context, it changes hands as part of a non-financial transaction (or vice versa)? On one side, if the successive holders were bound by the original classification, there would be a serious risk of purchasers suffering from an information asymmetry. On the other side, if transferring a crypto-asset could affect its legal status, sophisticated parties might exploit this rule to engage in regulatory arbitrage. One might adjust the contextual methodology, to the effect that whether a crypto-asset amounts to a financial instrument depends (also) on whether *a sufficient amount of crypto-assets of the same type* are traded in a financial context. However, this adjustment raises even more questions. If a crypto-asset is not perfectly fungible, how should one identify other crypto-assets of “the same type”?<sup>21</sup> Assuming a “type” of crypto-asset can be ascertained, how widespread must its “financial” use be before that crypto-asset is deemed to fall under MiFID II? Should purchasers be protected from the risk of subsequent market developments affecting the rights and obligations attached to the crypto-asset purchased and, if so, how? Thirdly, the transposition of MiFID II into national legal system entails that the same crypto-asset can constitute a financial instrument in one Member State but not in another. The consequence is an uneven playing field and a substantial risk of regulatory arbitrage.<sup>22</sup>

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<sup>20</sup> S. L. FURNARI-R. LENER, *Contributo alla Qualificazione Giuridica dell'Offerta al Pubblico di Utility Token (Anche) alla Luce della Proposta di Regolamento Europeo sulle Cripto-Attività*, in (2021) 16 Bocconi Legal Papers 63, 87-91, 97-102. “Initial coin offering” is meant in a relatively broad sense, extending beyond “coins” in the sense of “crypto-currencies”. Again, there is an analogy with the *Howey* test: J. CLAYTON, *Statement on Cryptocurrencies and Initial Coin Offerings* (17 December 2017) <<https://www.sec.gov/news/public-statement/statement-clayton-2017-12-11>>.

<sup>21</sup> On the question of fungibility, see text to fns 38-39. Cf T. DRYJA, *Lecture 17: Anonymity, Coinjoin and Signature Aggregation* in N. NARULA-T. DRYJA, *MIT MAS.S62 Cryptocurrency Engineering and Design* (Spring 2018) MIT OpenCourseWare <<https://www.youtube.com/watch?v=BFwc2XA8rSk&list=PLU14u3cNGP61KHzhg3JIJdK08JLSlcLId&index=16&t=711s>>.

<sup>22</sup> ESMA (fn 13) paras 6, 80-89, 177; Financial Markets Law Committee, “Taxonomical Approaches to Cryptoassets: Response to European Commission Consultation – Part II” (March 2020) paras 2.6-2.8; Tomczak (fn 10) 370-71. Relatedly, MiFID II does not harmonise the underlying rules – of company law, for

Importantly, although the rules contained in MiCAR are inspired by MiFID II, there are significant differences between the two.<sup>23</sup> As a result, if commercial parties struggle to predict ex ante whether a crypto-asset is a financial instrument – and thus which legal regime applies – this causes significant uncertainty in practice. In this light, some commentators have argued that MiCAR should resemble MiFID II more closely, and an argument in their favour is that, by flattening the differences between different regimes, the uncertainty surrounding their respective scope of application would lose importance.<sup>24</sup> However, MiCAR commits to the “same activities, same risks, same rules” principle, and a corollary of the principle would seem to be that different activities, if generating different risks, should be subject to different rules.<sup>25</sup> In this sense, one should be wary of folding MiCAR into MiFID II, pursuing certainty at the cost of overlooking meaningful differences between different crypto-assets.

An issue raised by many commentators is that of “hybrid” tokens: the fact that a crypto-asset has a sufficiently weighty financial element – therefore amounts to a financial instrument – does not mean that the crypto-asset cannot concurrently have some other, significant, non-financial function; when those two elements co-exist, the tokens seems to simultaneously fall on both sides of the MiCAR-MiFID divide.<sup>26</sup>

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example – which influence how MiFID II categories are applied in different Member States: see Annunziata (fn 18) 7. Cf Explanatory Memorandum (fn 11) 4-5; Recital 6.

<sup>23</sup> ANNUNZIATA (fn 18) 11-12; Furnari and Lener (fn 20) 92; G. ANSIDERI, *CASPs: procedura autorizzativa e requisiti prudenziali nel MiCAR* (2022) in *Questa rivista*, 7-8. 217; F ANNUNZIATA, “The Licensing Rules in MiCA” in D Moura Vicente, D Pereira Duarte, and C. GRANADEIRO (eds), *Fintech Regulation and the Licensing Principle* (European Banking Institute 2023) 121-23. Cf C. FRIGENI, *Il mercato primario delle cripto-attività. Offerta al pubblico e regime di trasparenza nella proposta di Regolamento MiCA* (2022), in *Osservatorio del diritto civile e commerciale*, special issue 23, 25-26. For a normative criticism of this approach, see P. MAUME, *The Regulation on Markets in Crypto-Assets (MiCAR): Landmark Codification, or First Step of Many, or Both?*, (2023) 20 ECFR 243, 251.

<sup>24</sup> T. VAN DER LINDEN-TINA SHIRAZI, *Markets in crypto-assets regulation: Does it provide legal certainty and increase adoption of crypto-assets?*, (2023) 9(22) *Financial Innovation* 7, 22-23, 25, 27. See also ZETZSCHE *et al* (fn 18) 222-23.

<sup>25</sup> See Recital 9.

<sup>26</sup> FMCL (fn 7) para 2.7; FMLC (fn 22) para 2.10; FURNARI-LENER (fn 20) 84-85; ZETZSCHE *et al* (fn 18) 208; VAN DER LINDEN-SHIRAZI (fn 24) 22. See also A. BLANDIN-A. S. CLOOTS, H. HUSSAIN-M. RAUCHS-R. SALEUDDIN-J. G. ALLEN-B.

However, this concern seems at best exaggerated. As a matter of formal coherence, MiCAR clearly provides that, if a crypto-asset is subject to MiFID II, it is necessarily exempt from MiCAR. There is therefore no risk of double jeopardy.<sup>27</sup> As a more substantive matter, one might argue that it is inappropriate to equate crypto-assets which have an exclusively financial nature to those which have some ulterior function. A first response is that this issue is rather narrow in scope. Commentators tend to talk in the abstract, hypothesising that “utility tokens may also be used for investment” without providing any real-life examples.<sup>28</sup> When an example is provided, it is Ether,<sup>29</sup> which is a highly versatile crypto-asset;<sup>30</sup> it follows that, if ascertaining whether a crypto-asset is a financial instrument is a case-by-case exercise, it is only in some circumstances that Ether can have a hybrid character. A second response is that what critics have dubbed “hybrid tokens” is nothing more than the well-trodden notion of hard cases. In MiCAR and MiFID II, as everywhere else in law, rules have an open texture,<sup>31</sup> and it should be no surprise that the MiCAR-MiFID divide is difficult to apply to certain cases. Inventing a *tertium quid* – “hybrid tokens” – is not only conceptually unnecessary, but might be actively misleading, in so far as it suggests (falsely) that a tripartite structure would be perfectly unambiguous, as if the distinction between hybrid tokens and financial instruments were self-evident and uncontroversial. Hence, especially considering that the issue of hybrid tokens is quite narrow in

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ZHANG-K. CLOUD, *Global Cryptoasset Regulatory Landscape Study*, in *Cambridge Centre For Alternative Finance* 13, 18, 37, 54, 65, 83, 87, 106; ESMA (fn 13) paras 80, 85; CONSOB, *Le offerte iniziali e gli scambi di crypto-attività*. Rapporto finale (2 January 2020) 10.

<sup>27</sup> Cf FINMA, *Guidelines for enquiries regarding the regulatory framework for initial coin offerings (ICOs)* (16 February 2018) 3.

<sup>28</sup> VAN DER LINDEN-SHIRAZI (fn 24) 7, 22. See also the rest of fn 24.

<sup>29</sup> FURNARI-LENER (fn 20) 84-85; BLANDIN *et al* (fn 26) 83.

<sup>30</sup> <<https://ethereum.org/en/eth/>>; D. RODECK, “What Is Ethereum? How Does It Work?” *Forbes* (16 February 2023) <<https://www.forbes.com/advisor/investing/cryptocurrency/what-is-ethereum-ether/>>.

<sup>31</sup> See, eg, HLA Hart, *The Concept of Law* (2nd edn, OUP 1994) 123-36; J. RAZ, “Dworkin: A New Link in the Chain” (1986) 74 *California Law Review* 1103; N. MACCORMICK, *Legal Reasoning and Legal Theory* (OUP 1994) ch 8; B Bix, *Law, Language, and Legal Determinacy* (OUP 1995); R. DWORKIN, *Law’s Empire* (Hart Publishing 2021) chs 7 and 9.



scope, the ulterior category would seem to do more harm than good. A third response to critics is that it may well be that EU law has a tendency to classify legal devices as financial instruments too readily, ignoring ulterior functions – but, if that is the case, the problem lies in MiFID II and its transposing national measures, and not MiCAR.

Since its proposal, MiCAR has been amended by imposing on the ESMA a duty to issue guidelines on how to classify crypto-assets.<sup>32</sup> This is a highly desirable opportunity to cure, at least in part, the ambiguities relating to MiCAR's scope. Importantly, the ESMA's intercession will provide authoritative guidance as to the meaning of MiFID II, therefore will narrow the discretion originally afforded by the Directive to Member States. This is a significant transfer of competences, which was originally thought unlikely;<sup>33</sup> the political cost of this amendment can be taken as evidence of its practical importance and, impliedly, the seriousness of MiCAR's present ambiguity.

There are other sorts of crypto-assets which are excepted from MiCAR. Non-fungible tokens (NFTs), for instance, fall outside the scope of MiCAR,<sup>34</sup> therefore are regulated only in so far as they amount to financial instruments under MiFID II. Although MiCAR is not perfectly clear on this matter, the justification for excepting NFTs seems to be that the NFT market is not sufficiently definite, and not sufficiently large, for the regulatory burden to be proportionate.<sup>35</sup> This view would explain why fractional NFTs – sufficiently fungible for a definite market to form – are instead subject to MiCAR,<sup>36</sup> as well as why Art 142(2)(d) binds the Commission to report on developments in NFT markets – if, for instance, they increased meaningfully in size – and assess, in that light, whether regulation is necessary and feasible. Rather sensibly, whether a token is non-fungible is ascertained with reference not to its labels – such a unique identifier – but its “de facto features” and “de facto uses”.<sup>37</sup> Yet, this casuistic approach resembles that of MiFID II and *Howey*, and can hence be expected to give rise to

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<sup>32</sup> Art 2(5). See also Recital 14.

<sup>33</sup> TOMCZAK (fn 10) 371.

<sup>34</sup> Art 2(3).

<sup>35</sup> See Recital 15 of the MiCAR proposal (COM(2020) 593) and Recital 10 of the final version of MiCAR.

<sup>36</sup> Recital 11 of the final version of MiCAR.

<sup>37</sup> *Ibid.*

similar practical difficulties. Indeed, MiCAR makes no attempt to define the core idea of fungibility, so there is a good argument that the concept of “NFT” is, if anything, even more difficult to apply than the notion(s) of “financial instruments”. Recital 11 tries to offer some degree of clarity by providing that the fact that crypto-assets are issued as “a large series or collection” is an “indicator” that they are fungible. But what constitutes a “series or collection”? And how “large” is “large” enough? And how much weight should one give to that “indicator”?<sup>38</sup> Recital 11 also states that a crypto-asset can only be non-fungible if the asset represented is non-fungible too, but in doing so places further emphasis on the idea of fungibility, the meaning of which is far from settled.<sup>39</sup> MiCAR’s “substance over form approach” is sound, but is only helpful if one knows what the relevant “substance” is.

Proportionality is expressly recognised as being the normative basis for Art 4(2)-(3), which outlines a range of cases where the offer to the public of a crypto-asset – provided it is neither an asset-referenced token nor an e-money token – is either fully or partially exempted from MiCAR’s *ex ante* regulation.<sup>40</sup> Art 16(2) extends one of those exemptions – where a crypto-asset is offered exclusively to “qualified investors” – to asset-referenced tokens, relieving the issuer from the authorisation requirement, and adds that the same applies as long as the average outstanding value of an asset-referenced token issued does not exceed €5 million and its issuer is “not linked to a network of other exempt issuers”. Art 48(4) contemplates the same €5 million threshold in relation to e-money tokens, but envisions the exemption as

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<sup>38</sup> See MAUME (fn 23) 259-61.

<sup>39</sup> For a technical perspective, see Dryja (fn 21); L. LESAVRE-P. VARIN-D. YAGA, *Blockchain Networks: Token Design and Management*, Overview National Institute of Standards and Technology Report 8301 (February 2021) 1, 5-6, 72. For an aesthetic perspective, see M. MAZZOCUT-MIS-A. SCANZIANI, *NFT: tra esperienza estetica e nuovi mercati dell’arte*, in A. CANEPA (ed), *Il mercato dei non fungible tokens tra arte, moda e gamification* (Milano University Press 2024). For a more accessible perspective, see N. CHARNEY-K. SCHACHTER, *The NFT Book: Everything You Need to Know About the Art and Collecting of Non-Fungible Tokens* (Rowman & Littlefield 2023) 3-4, 37-38; cf M. FORTNOW -Q. TERRY, *The NFT Handbook: How to Create, Sell and Buy Non-Fungible Tokens* (Wiley 2021) ch 3.

<sup>40</sup> See Recitals 26-27 of the final version; Recitals 15-17 of the MiCAR proposal. See also Arts 4(4) and 4(8), which narrow the scope of the preceding exemptions.

“optional”, as under Art 9(1) Directive 2009/110/EC. These provisions resemble each other in two respects. Firstly, their putative justification is that they concern offers to the public which are so modest that the burdens imposed by MiCAR would be disproportionate, both for offerors (who would have to meet demanding regulatory standards) and supervisors (who would have to verify the offerors’ compliance).<sup>41</sup> In this sense, these exemptions from the white paper requirement resemble some of the exemptions from Art 3(1) of the Prospectus Regulation – though one may legitimately question to what extent this analogy can hold and to what extent it is upheld by MiCAR.<sup>42</sup> Second, these provisions rely on the notions of “asset-referenced tokens”, “e-money tokens”, and “utility tokens”, which are not free from difficulty.

Lastly, MiCAR does not apply to central bank digital currencies (CBDCs).<sup>43</sup> No justification is offered, but one possibility is that CBDCs are a unique sort of crypto-asset, which deserves rules ad hoc, and, because the prospect of CBDCs is still relatively remote, regulatory efforts should wait until more information is available.<sup>44</sup>

### 2.3. *Types of regulated crypto-assets*

The crypto-assets which fall within the scope of MiCAR are sorted into “hierarchical” categories, each subject to different rules.<sup>45</sup> E-money tokens – which “purport[] to maintain a stable value by referencing the value of one official currency” – are subject to Title IV and, in so far as it is compatible with MiCAR, Titles II and III of Directive 2009/110/EC.<sup>46</sup> Asset-referenced tokens – the subject-matter

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<sup>41</sup> Recitals 43 and 66.

<sup>42</sup> Regulation (EU) 2017/1129 OJ L168. See Recitals 12-15 and its Explanatory Memorandum COM(2015) 583 13. For a specific comparison of the thresholds set by MiCAR and by the Prospectus Regulation, see section 3.2 of this essay. For broader comparisons between the two measures – beyond the scope of this paper – see F. ANNUNZIATA (fn 18); MAUME (fn 23) 264; ZETZSCHE *et al* (fn 18) 211-13, 222; C. FRIGENI (fn 23); C. FAILLA, *Big Tech and E-money Token*, in *Questa rivista*, III, 2023, 431, 445-46.

<sup>43</sup> Recital 13. See also Art 2(2)(c).

<sup>44</sup> On the ongoing discussions concerning CBDCs, and in particular a digital euro, see fns 120 and 123-24.

<sup>45</sup> ZETZSCHE *et al* (fn 18) 209. See also BLANDIN *et al* (fn 26) 18.

<sup>46</sup> Arts 3(1)(7) and 48(3). See Recitals 18-19.

of Title III – are those which do not amount to e-money tokens, but nonetheless “purport[] to maintain a stable value by referencing another value or right or a combination thereof, including one or more official currencies”.<sup>47</sup> The residual group of crypto-assets, which neither fall in an excepted category nor constitute an e-money token or asset-referenced token, is dealt with by Title II.

One difficulty with this structure is that it lends itself to excessive generalisations. In this respect, Title II, being a dustbin category, is the more obvious suspect. The only sort of crypto-asset which Title II mentions in positive terms – what that crypto-asset is, rather than what is not – is utility tokens, which are those “only intended to provide access to a good or a service supplied by [their] issuer”.<sup>48</sup> But Title II is wider.<sup>49</sup> It also includes, for example, crypto-currencies like Dai, which stabilise their value not by referring to an asset, but through algorithms, and crypto-currencies like Bitcoin, which make no effort to stabilise their value at all. In addition, Title II includes fractional NFTs, governance tokens (like UNI), platform tokens (like Ether and Ada), and “meme” tokens (like Dogecoin and PutinCoin). These different tokens have vastly different features and are targeted towards vastly different demographics, with vastly different degrees of technical, legal, and commercial knowledge. However, with the exception of utility tokens – expressly subject to some special provisions<sup>50</sup> – Title II insists on subjecting all the aforementioned tokens to the same rules, which seems unduly heavy-handed. A similar risk of heavy-handedness arises from Title III. The definition of asset-referenced tokens is very broad, and their key feature – stability – is likely to vary significantly.<sup>51</sup> Accordingly, an algorithmic stablecoin and an asset-referenced token may exhibit a similar degree of stability, yet be nonetheless subject to very different rules. This problem is especially acute in relation to small issues of crypto-assets: Arts 4(2)-(3) and 16(2) set out different tests to determine whether an issue is excepted from MiCAR, so how a crypto-

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<sup>47</sup> Art 3(1)(6).

<sup>48</sup> Art 3(1)(9).

<sup>49</sup> Recital 18.

<sup>50</sup> See Arts 4(6), 6(5)(d), and 12(8), and Annex 1, Part D para 4 and Part G paras 4-5.

<sup>51</sup> TOMCZAK (fn 10) 373-74.

asset is classified can affect not simply which rules apply, but whether any rules apply at all.

Another difficulty is that what amounts to a utility token is somewhat uncertain. In particular, how is one to determine for what purpose a given crypto-asset is “intended”? The English version of this definition seems to be written from the issuer’s perspective, suggesting that all that matters is the issuer’s own objectives and expectations. It would follow that, if a bus company issued tokens and planned for those tokens to be used in place of bus tickets, but those tokens were instead used by the recipients as a means of exchange, those tokens would nonetheless remain a utility token. This legal regime, if applied superficially, would lend itself to abuse: an unscrupulous issuer could give the impression that he intends for a token to provide access to an asset, while in reality the token is instead used as a crypto-currency, with the asset acting a reference to stabilise its value; thus, the issuer would evade the rules set out in Title III in favour of the less burdensome ones contained in Title II.<sup>52</sup> Crucially, the alternative to this superficial approach would require thorough investigations into the minds of issuers, which would be expensive and time-consuming. By contrast, although the Spanish version largely retains the issuer’s point of view, “utilizado” might suggest that the issuer’s own plans are not conclusive, and that the purchasers’ subsequent behaviour is relevant too. Normatively speaking, this reading is decidedly preferable. Descriptively speaking, however, the meaning of MiCAR is unclear, especially if one inspects other translations. On the one hand, the German version employs the expression “bestimmt”, which bears a closer resemblance to its English equivalent. On the other, the Italian translator uses the uniquely opaque “destinato” which, if anything, evokes a more objective test, that transcends the issuer’s state of mind. Such an objective test might be the same market-wide behavioural assessment to which the Spanish translation hints, but need not be: the test could also be what an external observer would, in light of the inherent features of the crypto-asset in question, understand its function to be. Another unanswered question is what amounts to a “service”. Do platform tokens, which provide access to blockchain applications – or provide access at a discount – amount to utility tokens? What about

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<sup>52</sup> Cf MAUME (fn 23) 257-58.

governance tokens like UNI? There is an argument that the developers of a DLT provide a service on behalf of the issuers of governance tokens when they design and implement new protocols in accordance with the wishes of the holders of governance tokens.<sup>53</sup> And what about in-game currencies, like MANA, which allow users to purchase digital goods?<sup>54</sup> Especially if platform, governance, and in-game tokens were included, the category of “utility tokens” would be very broad and heterogeneous, calling into question the adequacy of the special rules contained in Title II.

#### 2.4. CASPs

Title V is dedicated to crypto-asset service providers (CASPs), and with good reason: crypto history offers plenty of easy cases in which the careless, reckless, or fraudulent management of CASPs had adverse impacts on investors and market stability, from the hacks suffered by Bitfinex, Binance, and Coincheck, to the insolvency of Mt Gox, Celsius, and BlockFi, to the recent downfall of FTX.<sup>55</sup> However, one may legitimately question if the notion of “crypto-asset service” adopted by MiCAR is sufficiently wide and if its idea of “provider” is sufficiently clear.

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<sup>53</sup> Cf Organisation for Economic Co-operation and Development, *Why Decentralised Finance (DeFi) Matters and the Policy Implications*, (19 January 2022), which takes a broader view, based on “utility” rather than “access to goods or services”, and thus appears to assume that governance tokens fall into the category.

<sup>54</sup> Cf FINANCIAL MARKETS LAW COMMITTEE (fn 7) para 2.5.

<sup>55</sup> For a moderately critical view of CASPs’ past practices, see T. DRYJA, *Lecture 10: PoW Recap, Other Fork Types*, in N. NARULA-T DRYJA, *MIT MAS.S62 Cryptocurrency Engineering and Design* (Spring 2018) MIT OpenCourseWare <<https://www.youtube.com/watch?v=muwNEvhy6Po&list=PLU14u3cNGP61KHzhg3JIJdK08JLSlcLld&index=9>> 56:00-1:00:10. For a more pessimistic view, see J McAfee, “Keynote” at *BlockChain: Money* (London 2017) <<https://www.youtube.com/watch?v=uJOPpnJB4sI>>. On the downfall of FTX, see J. OLIVER-J. MILLER, *Sam Bankman-Fried says he was ‘surprised’ by FTX’s \$8bn balance-sheet hole*, in *The Financial Times* (27 October 2023) <<https://www.ft.com/content/d0f641e8-2786-4281-a61d-4fe60d2796a1>> and B. MONTGOMERY-V. BEKIEMPIS-L. BECKETT, *Sam Bankman-Fried denies messy hair part of ‘tech genius’ persona during trial*, in *The Guardian* (30 October 2023) <<https://www.theguardian.com/business/2023/oct/30/sbf-testifies-ftx-trial-crypto-day-3>>.

As to “crypto-asset services”, Art 3(16) provides a list of activities regulated by MiCAR. Although the list is phrased in exhaustive terms, it appears to ignore conspicuous figures of the crypto world. The most straightforward lacuna concerns the mining community of proof-of-work ledgers.<sup>56</sup> Individual miners add new blocks to the ledger, allowing broadcasted transactions to be entered into the shared record. Because it is up to miners to choose which broadcasted transactions they want to insert in the blocks being mined, there is the risk of transactions, even if valid according to the ledger’s consensus rules, being ignored by miners and ultimately censored. Admittedly, mining is a competitive – indeed, highly adversarial – business, and miners currently have an overwhelming incentive to discriminate between different transactions solely based on the fees which each transaction allocates to the miner.<sup>57</sup> However, there is nothing to guarantee that the mining market will continue being competitive forever. In relation to Bitcoin, for example, the five biggest mining pools – groups of miners who share mining rewards and fees – currently command more than 80% of the total mining power. Thus, whereas collusion between miners representing 51% of the mining power would be enough to effectively derail Bitcoin, this is not a completely outlandish possibility.<sup>58</sup> Dishonest miners can only be effectively penalised off-

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<sup>56</sup> See R. LENER-S. L. FURNARI-N. LORENZOTTI-A- DI CIOMMO-R.A. LENER, *The Virtual Currency Regulation Review: Italy*, in M. S. SACKHEIM-N. A. HOWELL (eds), *The Virtual Currency Regulation Review* (5th edn, The Law Reviews 2022): the Authors provide for a “Regulation of Miners” heading, only to then specify that, as a matter of national law – and now, it seems, EU law as well – there are no specific rules.

<sup>57</sup> S. NAKAMOTO, *Bitcoin: A Peer-to-Peer Electronic Cash System*, 4; C. CATALINI-J. S. GANS, *Some Simple Economics of the Blockchain*, NBER Working Paper Series, Working Paper 22952 <<http://www.nber.org/papers/w22952>> A-2.

<sup>58</sup> <<https://www.blockchain.com/explorer/charts/pools>>; <<https://btc.com/stats/pool>>. Earlier, D. VORICK, *Managing Centralization in Mining*, at *CES Summit 2019* (MIT Digital Currency Initiative) <[https://www.youtube.com/watch?v=IW2bjXQLnY0&list=PLpWOGI3WdhkV8oFmyWZ4VfqXG1\\_hDbpC4&index=76&t=1007s](https://www.youtube.com/watch?v=IW2bjXQLnY0&list=PLpWOGI3WdhkV8oFmyWZ4VfqXG1_hDbpC4&index=76&t=1007s)>. See also V. BUTERIN, *Ethereum: A Next-Generation Smart Contract and Decentralized Application Platform*, in (2014) 32 and P. DE FILIPPI-A. WRIGHT, *Blockchain and the Law: The Rule of Code* (Harvard University Press 2018) 40. Cf studies which suggest that there is a limit to centralisation amongst miners: L. W. CONG, Z. HE-J. LI, *Decentralized Mining in Centralized Pools*, NBER Working Paper 25592

chain and, although decentralised mechanisms have been proposed,<sup>59</sup> the law may prove worthwhile in this respect. Another threat to competition in the mining market is the high barriers to entry, which may prevent prospective miners from joining the market.<sup>60</sup> From this perspective, it is especially concerning that ASICs – the primary piece of hardware used by miners for certain distributed ledgers, including Bitcoin – are manufactured by two companies only, TSMC and Samsung, which in turn are likely to share supply chains. Similarly, there are only five manufacturers of mining rigs, with the biggest – Bitmain – dominating the market.<sup>61</sup> These commercial actors, if coordinated, may well control access to the mining market, prejudicing its efficiency and undermining the stability of the crypto ecosystem which is built on top of that market.

Miners are not the only influential group overlooked by MiCAR. Consider the Parity saga. In 2017, three of Parity’s multi-signature wallets were hacked, with Parity’s clients losing a considerable amount of Ether; Parity’s attempt to remove that vulnerability unintentionally created a new bug, allowing funds in other wallets to be frozen. In response, Parity submitted an Ethereum Improvement Proposal (EIP-999) to re-write the Ethereum ledger and undo the second hack. 52.6% of the Ethereum community voted against EIP-999, which was ultimately scrapped. Notwithstanding, the design of the poll proved controversial. First, votes were weighed to reflect the amount of Ether held by each voter. This format differed from that of an earlier poll, held in 2016, in which it was instead decided that a hack – against the DAO smart contract – should be unwound.<sup>62</sup> From a loftier perspective, the design of the Parity vote could also be argued to be inconsistent with

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<<http://www.nber.org/papers/w25592>>; G. HUBERMAN-J. D. LESHNO-C. MOALLEMI, *Monopoly without a Monopolist: An Economic Analysis of the Bitcoin Payment System*, in (2021) 88 *Review of Economic Studies* 3011.

<sup>59</sup> VORICK (fn 58) 12:10-16:35.

<sup>60</sup> HUBERMAN *et al* (fn 58) 3011, 3013-14.

<sup>61</sup> VORICK (fn 58) 00:45-02:15; A BLANDIN-G PIETERS-Y WU-T. EISERMANN-A. DEK-S. TAYLOR-D. NJOKI, *3<sup>rd</sup> Global Cryptoasset Benchmarking Study*, Cambridge Centre for Alternative Finance (September 2020) 32-34; <<https://news.bitcoin.com/new-study-highlights-bitmains-s19-mining-rigs-dominate-bitcoin-networks-hashrate/>>. See also BUTERIN (fn 59) 32.

<sup>62</sup> <<https://ethereum.org/en/history/>>.



the egalitarian ethos of distributed ledgers.<sup>63</sup> Second, users with frozen funds – contingent on EIP-999 succeeding – were not only entitled to vote, but benefitted from the weighed-voting rule.<sup>64</sup> This is suspicious, especially considering that Gavin Woods (the CEO of Parity) was both personally affected by the hack and a co-founder of Ethereum,<sup>65</sup> that the Ethereum Foundation’s Development Team had collaborated in designing Parity’s flawed code,<sup>66</sup> and that the Ethereum Foundation has since made donations to Parity.<sup>67</sup> Developers like the Ethereum Foundation do not simply implement community decisions but, at the very least, have ample opportunities to materially affect the community’s decision-making process. Developers can even bestow upon themselves ulterior powers, exercisable without the community’s prior approval, such as the power of Ripple’s developers to unilaterally freeze issued tokens.<sup>68</sup> Thus, there is a well-established argument that substantial power is centralised into the hands of developers,<sup>69</sup> and the Court of Appeal of England and Wales has in fact recently held,

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<sup>63</sup> These aspirations are evidenced, for instance, by the memory-less hash functions used in proof-of-work systems, which tend to reduce differences between miners, and by the distinctive crypto goal of “financial inclusion”, on which see fn 147.

<sup>64</sup> <<https://www.ccn.com/330-million-eip-999-stokes-debate-over-eth-frozen-by-parity-s-contract-bug/>>.

<sup>65</sup> J. WILMOTH, *\$330 Million: EIP-999 Stokes Debate Over ETH Frozen by Parity’s Contract Bug*, *CNN*, 4 March 2021 <<https://cointelegraph.com/news/eip-999-why-a-vote-to-release-parity-locked-funds-evoked-so-much-controversy>>.

<sup>66</sup> *The Multi-sig Hack: A Postmortem*, in *Parity.io* (20 June 2017) <<https://www.parity.io/blog/the-multi-sig-hack-a-postmortem>>.

<sup>67</sup> P. LUCSOK, “Parity Technologies awarded \$5 million grant by the Ethereum Foundation” *Parity.io* (7 January 2019) <<https://www.parity.io/blog/parity-technologies-awarded-5-million-grant-from-the-ethereum-foundation/>>; Ethereum Team, “Announcing an Ethereum Foundation Grant to Parity Technologies” *Ethereum Foundation Blog* (7 January 2019) <<https://blog.ethereum.org/2019/01/07/announcing-an-ethereum-foundation-grant-to-parity-technologies>>.

<sup>68</sup> “Common Misunderstandings about Freezes” *XRP-org* <<https://xrpl.org/common-misconceptions-about-freezes.html>>.

<sup>69</sup> J. ITO, “Why Bitcoin is and isn’t like the Internet” (23 January 2015) <<https://joi.ito.com/weblog/2015/01/23/why-bitcoin-is-.html>>; G. GENSLER, “Lecture 11: Blockchain Economics” in *MIT 15.S12 Blockchain and Money* (Fall 2018) MIT OpenCourseWare <[https://www.youtube.com/watch?v=\\_eGNSuTBc60&list=PLU14u3cNGP63UUkFL0onkxvF6MYgVa04Fn&index=12](https://www.youtube.com/watch?v=_eGNSuTBc60&list=PLU14u3cNGP63UUkFL0onkxvF6MYgVa04Fn&index=12)> 39:10-39:50.

overturning Falk J’s earlier judgment, that there is a “realistic argument” that developers may be subject to fiduciary duties.<sup>70</sup> What is puzzling is that MiCAR is aware of the governance dimension, and in fact sets out rules as to how CASPs should be internally governed, but overlooks the fact that distributed ledgers themselves raise governance issues.<sup>71</sup>

There are other entities which can be credibly argued to deserve regulation. These entities include those who provide non-custodial wallet software<sup>72</sup> – like Parity – as well as those who provide SPV software, node clients, or layer-2 facilities. In each of these cases, the risk is of users downloading a programme, relying on its soundness, and then being disappointed when that programme is discovered to have an unintended bug or a malicious virus. These entities also include mixers, which receive their clients’ crypto-assets and, after a series of complex transactions, return those assets with a more anonymous appearance. Although the crypto-asset vests in the mixer, it is unclear whether the service offered constitutes “safekeeping or controlling” so as to qualify mixers as “custodians” (a recognised type of CASP).<sup>73</sup> Given mixers’ predisposition to facilitating illicit activities, it would be definitely preferable if it did. Lastly, the OECD seems to equate the centralised powers wielded by miners and developers to the concentration of governance rights in the hands of users. By implication, if miners and developers were to amount to CASPs and attract regulation, so too should users, provided they command a sufficient proportion of governance rights.<sup>74</sup>

Conversely, there are good reasons to refrain from widening the notion of “crypto-asset service” to include miners, developers, software providers, and users with sufficient governance powers. One reason is that devising suitable rules would be very challenging, chiefly because the groups in question differ significantly from each other. Miners, like

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<sup>70</sup> *Tulip Trading Ltd v Bitcoin Association For BSV* [2023] EWCA Civ 83, (2023) 4 WLR 16.

<sup>71</sup> Art 68. See also Art 34.

<sup>72</sup> See F. ANNUNZIATA (fn 18) 4.

<sup>73</sup> Art 3(16)(a) and (17).

<sup>74</sup> OECD (fn 53) 21-22, 35-36, 59-60; S. ARAMONTE-W. HUANG-A. SCHRIMPF, *DeFi risks and the decentralisation illusion*, *BIS Quarterly Review* (December 2021) 21.

developers, can only affect the distributed ledger in so far as their actions are accepted by nodes, but miners' actions, as long as they comply with the consensus rules, are virtually certain to be accepted. Software providers are further removed from the ledger itself, and their influence depends on whether people use their software and, if so, how. Each user's governance powers, by contrast, is more clearly defined, and their exercise is more straightforwardly ascertainable. In addition, the holders of governance tokens are in a unique position in that their influence might derive from a legal right, which they could be therefore entitled to alienate. A regime like Title V – which contains some tailored provisions but is to a large extent homogenous – would therefore be inadequate. An ulterior challenge for regulation would be defining what is meant exactly by “governance power”: one thing is Uniswap, in which developers are bound to pre-determined on-chain governance processes, and another is Ethereum, in which polls are off-chain, informal, and designed on an “ad hoc” basis. There is also the question of what percentage of voting rights amount to a sufficient concentration of power to warrant subjecting a user to regulation. Relatedly, regulators would have to determine, when multiple miners or developers collaborate, what burdens should be borne by each collaborator.

Another reason to refrain from widening the category of CASPs is that it may be unnecessary. First, Title VI sets out general rules regarding market abuse and some – about insider dealing and market manipulation – could go a long way to cover misbehaviour by non-CASPs. Second, one of the crypto community's historical ambitions is to emancipate itself from the law, and extra-legal mechanisms – like prompting a hard fork, engaging in a mining counter-attack, or threatening those actions – have already been proposed to penalise rogues.<sup>75</sup> Third, a law-maker could legitimately adopt a less sympathetic stance – that, for example, the risk of downloading flawed software is so obvious that internet users should be expected to rely on their own judgement, and that the loss deriving from the use of defective software should generally lie where it falls. Thus, the current scope of Art 3(16) can be ultimately defended on the basis of proportionality: assuming the objectives of Title V are to protect market

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<sup>75</sup> See DRYJA (fn 21) 9:55-11:25; VORICK (fn 58) 12:50-16:35.

participants and preserve market stability, those objectives are suitably secured by the current version of MiCAR, meaning that widening the notion of “crypto-asset services”, being costly, would exceed the limits of what is appropriate and necessary.<sup>76</sup> The problem, however, is that MiCAR and the related documents do not make this argument, nor do they even acknowledge the issue.<sup>77</sup>

Turning to the term “providers”, Art 3(15) requires that a CASP be “a legal person or other undertaking”, and Recital 22 clarifies that “[w]here crypto-asset services are provided in a fully decentralised manner without any intermediary, they should not fall within the scope of this Regulation”. Two red flags are worth raising. The first is the prevailing confusion as to what decentralisation precisely is. Most commentators distinguish between centralised and decentralised activities, usually in relation to exchanges. The issue is that different commentators seem to be distinguishing between different things. Some define decentralised activities as those which are non-custodial, with clients retaining their crypto-assets and their private keys rather than to handing those over to a CASP.<sup>78</sup> Others focus not on custody, but on whether there is an off-chain orderbook – as opposed to trades being settled immediately onto the distributed ledger – in which case whoever controls that orderbook is deemed a centralised service

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<sup>76</sup> Art 3(4) TEU. See, for example, the Opinion of A.G. CAPORTI of 7 June 1977 in Case 114/76 *Bela-Mühle* [1977] ECR 1211, part 6, and Case C-375/96 *Galileo Zaninotto v Ispettorato Centrale* [1998] ECR I-6629 para 63.

<sup>77</sup> See the Explanatory Memorandum (fn 11) 5, which appears to treat the provisions of MiCAR as exhausting the relevant “stakeholders”. This may be attributable, at least in part, to the fact that relatively few people responded to the European Commission’s consultations, that most of those respondents were incumbent businesses, and that very few were based outside of the EU, where most of the crypto innovation has been taking place: European Commission, “Summary – Consultation on a new Digital Finance strategy” (24 September 2020) <[https://finance.ec.europa.eu/document/download/a8b51884-21b6-4b06-90ed-feb6dde7c3d6\\_en?filename=2020-digital-finance-strategy-consultation-summary-of-responses\\_en.pdf](https://finance.ec.europa.eu/document/download/a8b51884-21b6-4b06-90ed-feb6dde7c3d6_en?filename=2020-digital-finance-strategy-consultation-summary-of-responses_en.pdf)> 3-5; see also <[https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12089-Directive-regulation-establishing-a-European-framework-for-markets-in-crypto-assets/public-consultation\\_en](https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12089-Directive-regulation-establishing-a-European-framework-for-markets-in-crypto-assets/public-consultation_en)>.

<sup>78</sup> ESMA (fn 13) paras 36, 56-57, 105, 190-93, Appendix 1; S FOLEY-A. ASPRIS, *Market structure of cryptocurrencies*, in S. CORBET-A. URQUHART-L. YAROVAYA (eds), *Cryptocurrency and Blockchain Technology* (De Gruyter 2020) 99-100; CONSOB (fn 26) 12, 15.

provider.<sup>79</sup> Others still combine these two elements and thus derive the narrowest definition: decentralised enterprises are “automated market-makers” like Uniswap, with no custodian, no central counterparty, and no central orderbook.<sup>80</sup> One should note – and guard against – more ambiguous formulae, like decentralised businesses as those “without intermediaries”,<sup>81</sup> those which lack a “central entity”<sup>82</sup> or, even worse, those which have a “diffuse structure” instead of a “tangible structure”.<sup>83</sup> The legal landscape is a linguistic mishmash, and in fact produces apparent oxymorons such as “decentralised intermediaries”, as well as troublesome cases in which the same activity counts as decentralised under one definition but centralised under another.<sup>84</sup>

There is therefore some wisdom in the ESMA’s approach, which is to introduce an intermediate category of “hybrid” or “semi-decentralised” activities; such activities would include providing an off-chain central orderbook without storing clients’ private keys.<sup>85</sup> However, this structure is still limiting. Consider for example IDEX, which employs a “hybrid liquidity” system, comprising both a central orderbook, as if it were “semi-decentralised”, and a liquidity pool containing funds deposited by users into smart contracts, as if it were fully decentralised. When a client inputs an order, IDEX’s trading engine identifies the lowest-cost execution, (i) using funds from the liquidity pool only, (ii) matching the order against another order in the orderbook, or (iii) matching the order against an incompatible order in the orderbook and using funds from the liquidity pool to reconcile the two.<sup>86</sup> Whether IDEX functions as a semi-decentralised or a fully-decentralised service therefore varies depending on each specific trade

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<sup>79</sup> ARAMONTE *et al* (fn 74) 26.

<sup>80</sup> FURNARI-LENER (fn 20) 89. See also ANSIDERI (fn 23) 6.

<sup>81</sup> ANSIDERI (fn 23) 6.

<sup>82</sup> LENER *et al* (fn 56).

<sup>83</sup> R. LENER-S. L. FURNARI, *Cripto-attività: prime riflessioni sulla proposta della commissione europea. Nasce una nuova disciplina dei servizi finanziari “crittografati”?*, DB Approfondimenti (October 2020) 21-22. Translation mine.

<sup>84</sup> Ansideri (fn 23) 6-7, 12. Translation mine.

<sup>85</sup> ESMA (fn 13) paras 105, 192-93. See also Svec *et al* (fn 78) 101.

<sup>86</sup> <<https://docs.idex.io/overview/how-idex-works/automated-market-makers/hl-mechanics>>. Cf the account given in Svec *et al* (fn 78) 101, which ignores the liquidity pool and therefore treats IDEX as a hybrid service; to the same effect, BLANDIN *et al* (fn 26) 27.

and, even with reference to a specific trade, cannot be ascertained until the trade goes through.<sup>87</sup> Another difficulty arises in relation to systems of “hybrid custody”, in which the market operator has one private key and its client has another, and assets can only be used if both sign off on that use.<sup>88</sup> Such an arrangement could be plausibly be deemed both fully decentralised and fully centralised. And what if, rather than *both* private keys being necessary, *either* sufficed on its own to transfer the assets? Finally, there is an unconventional argument that calls into question the very notion of decentralisation: concentrations of governance power amount to an “element of centralisation [that] can serve as the basis for recognising DeFi platforms as legal entities similar to corporations”; “certain features of DeFi blockchains favour the concentration of decision power in the hands of large coin-holders”, meaning that “some centralisation is unavoidable” for every crypto-asset service.<sup>89</sup> DeFi and MiCAR cover distinct areas – MiCAR does not apply to financial instruments – yet the question of decentralisation applies identically to both, so this argument could be applied by analogy. Admittedly, this argument seems to overestimate the tendency of distributed ledgers to centralise governance rights, and then to overestimate the degree of concentration necessary for an arrangement to be meaningfully “decentralised”. Nonetheless, there may well be egregious cases in which a person or a small class has long-term control over a distributed ledger, and in those cases the “decentralised” label may be inadequate. Hence, a more nuanced view is that decentralisation is a matter of degree, and the reference in Recital 22 to “fully decentralised” – rather than simply “decentralised” – services is praiseworthy in so far as it reflects this more nuanced perspective. However, the good of that drafting choice is undone by MiCAR’s failure to provide any further insight into how “decentralisation” should be conceptualised.

Another red flag worth briefly raising in relation to Art 3(15) is that fully decentralised activities – whatever they are – remain unregulated by MiCAR, which is questionable. This issue, however, is not legalistic, as it is clear that MiCAR does not bite. Instead, this issue reflects the

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<sup>87</sup> Unless, that is, one had access to the trading engine and its databases and had the computational power to anticipate IDEX’s own servers.

<sup>88</sup> See BLANDIN *et al* (fn 26) 120.

<sup>89</sup> ARAMONTE *et al* (fn 74) 27-29.

inherent tension between the EU’s desire to regulate the crypto world and the crypto world’s insistence that it does not want – or even need – the interference of legal authorities. This discussion is therefore left to section 4.

### 2.5. *General points*

MiCAR’s definitional shortcomings are impliedly recognised by Art 3(2), which binds the Commission to specify technical elements of the definitions examined in this section and, in some cases, to adjust those definitions. This provision is a valuable opportunity to cure, at least in part, the ambiguities which affect MiCAR, but is not a panacea. Firstly, exercising the Art 3(2) power requires foresight, as well as the ability to formulate definitions which are both abstract and precise, and commentators argue that, as evidenced by the obscurity of EU financial regulation, the Commission is lacking in this respect.<sup>90</sup> Secondly, the Commission’s power to adjust the definitions originally laid down is rather limited. In particular, the Commission cannot redress the generalisations and lacunae identified above, except in so far as it can point to a subsequent “market development” or “technological development” which makes the adjustment necessary. Thirdly, especially if read jointly with Art 2(5), Art 3(2) seems to reflect a tendency for the EU legislature to rely excessively on other bodies. In principle, there is nothing wrong for a legislator to legislate in relatively general terms and then require another body to fill in the details; in fact, MiCAR makes heavy use of this technique, requiring the ESMA, EBA, and the ECB to issue technical standards and guidelines on a range of matters, from the proper content and form of white papers to the exchange of information between competent authorities.<sup>91</sup> However, these guidelines and standards concern the substance of individual rules contained in MiCAR, and each duty has a reasonably well-defined scope. Arts 2(5) and 3(2), by contrast, relate to definitional matters that bear heavily upon the broader scope of MiCAR itself. If, as it seems,

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<sup>90</sup> ZETZSCHE *et al* (fn 18) 220-21.

<sup>91</sup> Arts 6(11)-(12), 14(1), 17(8), 18(6)-(7), 19(10)-(11), 21(3), 31(5), 34(13), 35(6), 36(4), 38(5), 42(4), 45(7)-(8), 46(6), 51(10), 51(14)-(15), 60(13)-(14), 61(3), 62(5)-(6), 63(11), 66(6), 67(10), 71(5), 72(5), 76(16), 81(15), 82(2), 84(4), 88(4), 92(2)-(3), 95(10)-(11), 96(3), 109(8), and 119(8).

these matters are “essential elements” of MiCAR, they fall outside the range of matters which can be lawfully delegated.<sup>92</sup> If this is correct, the institutional impropriety of Arts 2(5) and 3(2) is aggravated by the vagueness of those provisions, which effectively requires the ESMA and the Commission to determine the scope of the powers conferred. The issue is further exacerbated by the fact that these broad powers are being conferred rather surreptitiously – compared, for instance, to FSMA 2023, which delegates the task of regulating crypto-assets to another body (HM Treasury) but does so much more transparently than MiCAR.<sup>93</sup>

Until Arts 2(5) and 3(2) come to fruition, MiCAR’s legalistic defects are likely to have adverse consequences in practice: from the perspective of commercial actors, (i) introducing uncertainty and thus increasing the difficulty of navigating regulatory requirements and (ii) imposing compliance costs as commercial actors adjust to the different interpretations of MiFID II employed in different Member States; from the perspective of supervisors, (iii) encouraging forum shopping and (iv) hindering the proper coordination of supervisory actions; from the perspective of consumers, (v) preventing them from knowing the content of their rights with sufficient certainty. Crucially, these are some of the same problems which justified EU intervention in the first place.<sup>94</sup>

Nevertheless, the discussion so far sits in stark contrast with the much more flattering views expressed by the crypto world, which see MiCAR as “exemplary”,<sup>95</sup> “a model for other regulators to emulate”,<sup>96</sup> which “embraces innovation”,<sup>97</sup> and amounts to a “pragmatic solution

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<sup>92</sup> Art 290(1) TFEU.

<sup>93</sup> See s 23.

<sup>94</sup> ESMA (fn 13) para 171-74, 178-79, 182-84; EBA (fn 15); Noble (fn 18) 7; Explanatory Memorandum (fn 11) 2-5; Recitals 5-7.

<sup>95</sup> M. CAVICCHIOLI, *MiCA: comments from Binance, Coinbase and Ripple*, in *The Cryptonomist* (21 April 2023) <<https://en.cryptonomist.ch/2023/04/21/binance-coinbase-ripple-comments-mica/>>, quoting Tom Duff Gordon.

<sup>96</sup> <[https://twitter.com/\\_RichardTeng/status/1656180694329208834](https://twitter.com/_RichardTeng/status/1656180694329208834)>.

<sup>97</sup> “Europe’s new crypto law” *Coinbase Bytes* (26 April 2023) <<https://www.coinbase.com/bytes/archive/europes-new-crypto-law>>. See also <<https://twitter.com/coinbase/status/1649104587012309010>>.



to the challenges we collectively face”.<sup>98</sup> This contrast is difficult to explain.

Perhaps, MiCAR’s linguistic ambiguities are not a drafting oversight, but a conscious legislative choice. That of crypto-assets is still an inchoate phenomenon, in that new types of crypto-assets are bound to arise, existing types of crypto-assets are bound to be put to new uses, and new services are bound to be offered. At the same time, MiCAR performs a gap-filling role, regulating the residual category of cases that is left after excepting those which are already governed by suitable measures and those which, at least for the moment, do not deserve any regulation at all.<sup>99</sup> There is thus the argument that, if MiCAR is to be truly “future-proof”, it must have some in-built slack to accommodate future developments. However, this argument should be rejected on two bases. In pragmatic terms, it is unduly far-sighted, in that it imposes considerable short-term costs – on market participants as well as supervisors – in the expectation of uncertain future benefits. There is no guarantee that the slack will ever be necessary at all, while in the meantime it will certainly hinder commerce. In more principled terms, this arrangement deals a heavy blow to the rule of law and seems to cheapen the EU legislature’s commitment to regulatory certainty. The ideal of “future-proof” legislation ought not to be an excuse for vagueness.

### 3. *Issues of content*

In terms of substance, there is much that MiCAR does well. Its treatment of the risk of money laundering, for example, is firm and comprehensive.<sup>100</sup> Firmness and comprehensiveness can at times degenerate into excessive heavy-handedness, and commentators had in fact criticised the original MiCAR proposal for subjecting custodian CASPs to an unreasonably strict liability, towards their clients, “for loss

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<sup>98</sup> R. BROWNE, *EU lawmakers approve world’s first comprehensive framework for crypto regulation*, in *CNBC* (20 April 2023) <<https://www.cnbc.com/2023/04/20/eu-lawmakers-approve-worlds-first-comprehensive-crypto-regulation.html>>.

<sup>99</sup> See Recital 4. See also ESMA (fn 13) paras 127, 130-31, 151, 174, 178-80; EBA (fn 15) paras 28-29; ANNUNZIATA (fn 18) 12, 14; ZETZSCHE *et al* (fn 18) 219-20.

<sup>100</sup> See Arts 18, 21(2)(e), 24(1)(g), 34(1)-(4), 60(7)(b)(ii), 62(2)-(3), 63(6), 64(1)(f), 68, and 76(1)(a) and (7)(h).

of crypto-assets ... resulting from a malfunction or hacks up to the market value of the crypto-assets lost”.<sup>101</sup> Happily, this concern was addressed during the legislative process, and the final version of MiCAR takes a more balanced approach, providing that liability does not bite unless the loss results from an incident “attributable” to the CASP. Importantly, MiCAR recognises that “attribution” is a vague concept and addresses this vagueness: first, it clarifies that an incident is not attributable to a CASP if “it occurred independently of the provision of the relevant service, or independently of the operations of the crypto-asset service provider”; then, it offers an example of a non-attributable event, “such as a problem inherent in the operation of the distributed ledger that the crypto-asset service provider does not control”;<sup>102</sup> finally, it stipulates elsewhere that cyber-attacks and malfunctions suffered by a CASP do give rise to liability.<sup>103</sup> The test provided is not exhaustive, nor are the clarifications perfectly clear, but in this instance the EU legislature has made a convincing effort to provide a sufficiently solid legalistic backing to the rules laid down. However, some problematic rules remain.

### 3.1. *Credit Institutions*

Credit institutions authorised under Directive 2013/36/EU enjoy preferential treatment under MiCAR. Specifically, credit institutions wishing to offer asset-referenced tokens to the public, or seeking admission to trading of asset-referenced tokens, are exempt from the authorisation requirement set out in Arts 18 and 20-21, and must instead comply with the slimmer procedure set out in Art 17.<sup>104</sup> Similarly, credit institutions wishing to provide crypto-asset services need not apply for authorisation under Art 63, and may simply notify the competent authority in accordance with Art 61.<sup>105</sup> These provisions have led some to accuse MiCAR of creating an uneven playing field which favours large incumbents.<sup>106</sup> However, this criticism seems to

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<sup>101</sup> Art 67(8). See ZETZSCHE *et al* (fn 18) 217-18.

<sup>102</sup> Art 75(8).

<sup>103</sup> Recital 83.

<sup>104</sup> Art 16(1).

<sup>105</sup> Art 59(1). See also Art 70.

<sup>106</sup> VAN DER LINDEN-SHIRAZI (fn 24) 24.

underestimate the burdensome requirements, contained in Directive 2013/36/EU, which credit institutions must satisfy to be authorised. For MiCAR to subject credit institutions to the same procedural onera as their competitors – not authorised under Directive 2013/36/EU – would impose a dual burden on credit institutions. *That* would constitute an unequal playing field.<sup>107</sup> Credit institutions may well have a “competitive advantage” relative to market newcomers, but that advantage is attributable not to MiCAR’s differential rules, but to the underlying fact that credit institutions entered the market earlier.

A similar issue arises from Art 48(1)(a) which, by providing that only authorised credit institutions and electronic money institutions can lawfully issue e-money tokens, seems to restrict market access and once again skew the playing field.<sup>108</sup> Here, the justification is that e-money tokens perform the same function as electronic money as defined in Directive 2009/110/EC – that is, to act as “surrogates for coins and banknotes”.<sup>109</sup> In fact, MiCAR formally recognises e-money tokens as a form of electronic money and, as a matter of substance, extends to holders of e-money tokens the distinctive right enjoyed by holders of electronic money – that is, a claim against the electronic money issuer to “redeem, at any moment and at par value, the monetary value of the electronic money held”.<sup>110</sup> In this light, the market for electronic money – and, it follows, e-money tokens – is a peculiar sort of playing field, where market participants are expected to play by peculiar rules. It is in its very nature to be uneven.

### 3.2. *The “disproportionate burden” provisions*

Arts 4(2)-(3), 16(2), and 48(4) have already been discussed from a legalistic perspective: they create exceptions where MiCAR does not bite, but rely on the blurry notions of “asset-referenced token” and “utility token”, contributing to MiCAR’s legalistic deficiencies. However, there are also good substantive objections to raise, as

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<sup>107</sup> See Recitals 44 and 78 of the final version of MiCAR; Recitals 28 and 54 of the MiCAR proposal.

<sup>108</sup> VAN DER LINDEN-SHIRAZI (fn 24) 24.

<sup>109</sup> Recital 18.

<sup>110</sup> Arts 48(2) and 49(2)-(4); Recitals 19 and 67.

proportionality – the putative basis for these exemptions – does not appear, at least at first glance, to be fully reflected in these provisions.

Commentators have already pointed out that, under the Prospectus Regulation, transferable securities are subject to the prospectus requirement only if the (yearly) volume of their issue exceeds €8 million, which is a higher threshold than what MiCAR sets for Title II (€1 million). This outcome is puzzling, in that regulation bites earlier for “a simple utility token” than it does for a security token, despite the fact that the offer of security tokens seems, if anything, more likely to affect market stability. Ultimately, the problem is deemed to lie with Art 4(2) of MiCAR, which sets too low a threshold and, therefore, fails to relieve issuers of some disproportionate regulatory burdens<sup>111</sup>.

Another possible objection is that MiCAR does not explain why these exceptions are wider for Title II, narrower for Title III, and narrower still for Title IV. If it is disproportionate to regulate the offer of utility tokens to fewer than 150 persons per Member State, for example, why is it proportionate to regulate an analogous offer of asset-referenced tokens or e-money tokens? There is a good argument that asset-referenced tokens and e-money tokens might, if widely adopted, pose an egregious threat to market stability,<sup>112</sup> but it does not follow that small issues of asset-referenced tokens or e-money tokens are any riskier than small issues of utility tokens. Furthermore, if it is necessarily disproportionate to regulate the offer of an asset-referenced token which has an average outstanding value of €5 million, why is the analogous exemption only “optional” for e-money tokens? In fact, some commentators proposed a general €8 million threshold, common to all crypto-assets within the scope of MiCAR,<sup>113</sup> which would seem much more consistent with the principle of proportionality.

At best, there ought to be some other consideration which explains why crypto-assets, and in particular asset-referenced and e-money tokens, deserve such harsh a treatment.

### 3.3. *The “store of value” and “means of exchange” provisions*

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<sup>111</sup> ZETZSCHE *et al* (fn 18) 223.

<sup>112</sup> See Recital 40.

<sup>113</sup> ZETZSCHE *et al* (fn 18) 223.

Issuers of asset-referenced tokens and e-money tokens, as well as CASPs who provide services in respect of asset-referenced tokens and e-money tokens, are prohibited from granting interest in relation to those tokens.<sup>114</sup> The justification offered in the Preamble is that allowing payment of interest would increase the risk of crypto-assets being used as a store of value.<sup>115</sup> But what would be so objectionable about crypto-assets being used for that purpose?

One explanation is that these provisions are meant to strengthen the distinction between MiCAR and MiFID II. On this view, using crypto-assets as a store of value is not inherently objectionable, but constitutes a “financial” application of crypto-assets, therefore should be permitted only if MiFID II is complied with. If complying with MiCAR were sufficient for an issuer or CASP to grant interest, there would be a grave risk of securities legislation being circumvented.<sup>116</sup> Thus, the “store of value” rules perform a purely taxonomical function, double-checking that arrangements like farming fall outside of MiCAR. However, this interpretation does not explain why this double-check should be limited to asset-referenced tokens and e-money tokens. After all, Title-II crypto-assets like Bitcoin are routinely farmed too and give rise to the same risk of mis-classification.

Another explanation for the “store of value” provisions is that they are meant to further a substantive objective: the more asset-referenced tokens and e-money tokens are used to store value, the less will official currencies be used for that same purpose; discouraging this phenomenon – and encouraging the use of the Euro – is essential for the EU to retain its monetary prerogatives.<sup>117</sup> There is much to support this reading, starting from MiCAR’s Explanatory Memorandum,<sup>118</sup> as well as the various provisions of MiCAR itself which expressly recognise the concern for monetary sovereignty as a legitimate basis for EU authorities to exercise wide discretionary powers to interfere heavily in crypto markets.<sup>119</sup> This account also explains why MiCAR

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<sup>114</sup> Arts 40 and 50.

<sup>115</sup> Recitals 58 and 68.

<sup>116</sup> ZETZSCHE *et al* (fn 18) 216; TOMCZAK (fn 10) 374.

<sup>117</sup> See Recital 41 of the MiCAR proposal; ECB (fn 9) section 2; LENER-FURNARI (fn 83) 3, 12.

<sup>118</sup> Explanatory Memorandum (fn 11) 2-3.

<sup>119</sup> Arts 17(5), 21(4), 24(2), 24(3), and Art 25(4).

does not apply to CBDCs which, unlike privately-issued cryptocurrencies, do not call into question central banks' monetary sovereignty, and instead are the very expression of that sovereignty.<sup>120</sup> One might note that CBDCs are mentioned only in the Preamble, while the body of MiCAR provides an exception for “the ECB, central banks of the Member States when acting in their capacity as monetary authorities, [and] other public authorities of the Member States”.<sup>121</sup> Accordingly, “two-tier” CBDC models – issued by private intermediaries, as in the case of the Aurum prototype<sup>122</sup> – are caught by MiCAR. This outcome seems to have been interpreted by some commentators as a drafting oversight,<sup>123</sup> but an alternative interpretation is that this is a conscious legislative choice aimed at further denying that private persons may have any monetary authority.<sup>124</sup> Indeed, there is hardly anything new in the argument that

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<sup>120</sup> See M. RASKIN-D. YERMACK, *Digital Currencies, Decentralized Ledgers, and the Future of Central Banking*, NBER Working Paper 22238 (May 2016) <<http://www.nber.org/papers/w22238>>; BANK OF ENGLAND and HM TREASURY, *The digital pound: a new form of money for households and businesses?*, in CP 797 (February 2023) 25-28; ECB, *Opinion of the European Central Bank of 31 October 2023 on the Digital Euro*, in CON/2023/34 paras 8.3-4. Indeed, some have even questioned whether CBDCs, in enhancing the efficient administration of monetary policy, could lend themselves to facilitating egregiously unwise monetary policies, as in the case of “helicopter drops”: O. WARD-S. ROCHEMONT, *Understanding Central Bank Digital Currencies (CBDC)*, an addendum to *A. Cashless Society – Benefits, Risks and Issues (Interim paper)*, Institute and Faculty of Actuaries (2019) para 3.4.3.

<sup>121</sup> Art 2(2)(c).

<sup>122</sup> See HONG KONG MONETARY AUTHORITY, *Project Aurum – A Prototype for Two-tier Central Bank Digital Currency (CBDC)*, in *BIS Innovation Hub* (October 2022) <<https://www.bis.org/publ/othp57.pdf>>.

<sup>123</sup> ZETZSCHE *et al* (fn 18) 223-24. See also ECB (fn 120) para 2.2, 6.1, which instead favours a two-tier model whereby a digital euro would be “distributed” by payment services providers; ECB, *A stocktake on the digital euro – Summary report on the investigation phase and outlook on the next phase* (October 2023) <[https://www.ecb.europa.eu/paym/digital\\_euro/investigation/profuse/shared/files/de\\_docs/ecb.dedocs231018.en.pdf](https://www.ecb.europa.eu/paym/digital_euro/investigation/profuse/shared/files/de_docs/ecb.dedocs231018.en.pdf)> section 3.

<sup>124</sup> See BANK OF ENGLAND AND HM TREASURY (fn 120) 53, which contemplates private businesses interacting directly with users – providing pass-through wallets, for example – but never issuing digital pounds in exchange for other forms of money, which would instead occur on a ledger administered by the Bank of England. On the difficulties of implementing a two-tier model, which would presumably rely on payment services providers while dealing a heavy blow to the business model of many financial intermediaries, see Ward and Rochemont (fn 120) paras 3.5-6. Cf C.

public authorities have a tendency to stymie monetary competition to protect their own monetary powers<sup>125</sup> and – although some have argued that currency competition is not feasible,<sup>126</sup> and others have argued that governments are ultimately not all that hostile to some degree of privatisation in the monetary system<sup>127</sup> – the EU legislator seems acutely aware of the risk of parallel currencies supplanting the Euro.

The concern for monetary sovereignty could also justify the restrictions imposed by MiCAR on the issue of asset-referenced tokens used widely as a means of exchange.<sup>128</sup> At one point in the Preamble, the EU legislator appears to justify these restrictions in terms of the “protection of holders ... in particular retail holders”.<sup>129</sup> However, if this really is the justification, it is unconvincing: there is nothing to suggest that a widely-adopted token is any riskier than a less widespread alternative; if anything, it is the less prominent crypto-assets which risk being instruments of fraud. Shortly afterwards, the EU legislator mentions “market integrity”, but again this would be a questionable justification: if a market lacks integrity, one would expect a regulator to impose heavier prudential requirements on the key market participants; setting a cap on the volume of that market, by contrast,

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CATALINI-W DAI LI-A DE GORTARI-A. LILLEY, *From Stablecoins to CBDCs: The Public Benefits of a Public-Private Partnership*, in (16 December 2021) <<https://dx.doi.org/10.2139/ssrn.3986192>>; U. BINDSEIL, *Tiered CBDC and the financial system*, ECB Working Paper 2351 (January 2020); U. BINDSEIL *et al*, *Digital euro: Debunking banks' fears about losing deposits*, in *The ECB Blog* (19 February 2024) <<https://www.ecb.europa.eu/press/blog/date/2024/html/ecb.blog20240219~ccb1e8320e.en.html>>.

<sup>125</sup> See F. A. HAYEK, *Denationalisation of Money. The Argument Refined* (3<sup>rd</sup> edn, Institute of Economic Affairs 1990) 32-33, 118-21. See also J. U. BLANCHARD III-F. A. HAYEK, *Exclusive Interview with F.A. Hayek*, Policy Report (May/June 1994) <[https://www.youtube.com/watch?v=s-k\\_Fc63tZI](https://www.youtube.com/watch?v=s-k_Fc63tZI)>; G. SELGIN, *Paul Krugman and the 'Ersatz' Theory of Private Currencies*, in *Cato at Liberty Blog* (9 June 2022).

<sup>126</sup> See M. FRIEDMANN-A. J. SCHWARTZ, *Has Government Any Role in Money?*, in A. J. SCHWARTZ, *Money in a Historical Perspective* (1987 University of Chicago Press). But see HAYEK (fn 122) 56.

<sup>127</sup> See O. ISSLER, *Hayek – currency competition and European monetary union Annual Hayek Memorial Lecture*, in *Institute of Economic Affairs* (27 May 1999) 8-12; A. TEBBLE, *Friedrich Hayek: Prophet of Cryptocurrency?*, in *Centre for the Study of Governance and Society Blog* (28 January 2021).

<sup>128</sup> Art 23.

<sup>129</sup> Recital 40 of the final version; Recital 25 of the MiCAR Proposal.

does nothing to enhance its integrity, and may even damage the market. A better rationale – mentioned in the MiCAR Proposal – is monetary sovereignty: the use of alternative means of exchange undermines the Euro, and the Euro is therefore strengthened by capping the circulation of the most threatening crypto alternatives.<sup>130</sup> If this is correct, it would also seem to follow that smaller issues of asset-referenced and e-money tokens, being more likely to circulate widely, deserve to attract the rules of Titles III-IV too; thus, this view explains why the exceptions created by Arts 16(2) and 48(4) are narrower than those under Art 4(2)-(3).

If asset-referenced tokens and e-money tokens are deemed to be “significant” – in terms of their customer base, market capitalisation, or transaction rate – their issuers are additionally subject to heavier prudential requirements and the EBA’s supervision.<sup>131</sup> Here, the concern for monetary sovereignty is expressly recognised as a justification.<sup>132</sup> The same rationale seems to underlie the provisions laid down for “significant” CASPs.<sup>133</sup>

However, this “monetary sovereignty” account is problematic. A first problem with these arrangements is the incoherent treatment of e-money tokens. On the one hand, they are recognised as electronic money and, presumably for that reason, are not subject to the “means of exchange” rules. Indeed, one of the key functions of money is to be used for payments, so it would be absurd to restrict the issue of electronic money simply because it is performing that function successfully. On the other hand, storing value is a key function of money too,<sup>134</sup> yet MiCAR expressly sets out to discourage the use of e-money tokens as a store of value. Admittedly, there is a good argument that e-money tokens risk giving rise to a parallel monetary system, undermining the EU’s ability to pursue an effective monetary policy. However, if that is the case, it is difficult to understand why the EU

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<sup>130</sup> Recital 4.

<sup>131</sup> Chapter 5 of Title III; Chapter 2 of Title IV.

<sup>132</sup> Recitals 59, 71, 102, and 104. See also MAUME (fn 23) 267 and the broader reference to “systemic risk” in ZETZSCHE *et al* (fn 18) 216.

<sup>133</sup> Chapter 5 of Title V.

<sup>134</sup> W. S. JEVONS, *Money and the Mechanism of Exchange* (D. Appleton & Company 1875) 15-16; M. FRIEDMAN-A. H. MELTZER, “Money”, in *Encyclopedia Britannica* <<https://www.britannica.com/money/topic/money>>; I Asmundson and C Oner, “What is Money?” (2012) *Finance & Development* 52.



should be so tolerant towards issuers of significant e-money tokens, who are capable of meaningfully affecting the supply of electronic money but are only subject to relatively trivial prudential requirements like liquidity stress testing.<sup>135</sup>

A second, related, problem lies in the treatment of asset referenced tokens: on the one hand, holders of asset-referenced tokens are conferred significant rights on the basis that asset-referenced tokens are likely to be used as a means of exchange;<sup>136</sup> on the other hand, those same holders are penalised when their tokens succeed as a means of exchange and further issues are hence restricted.

A third problem is the surprising lenience of Title II. Bitcoin or Ether, for instance, may well supplant official currencies – as in El Salvador, where Bitcoin is recognised as legal tender<sup>137</sup> – yet are completely unaffected by the “store of value” provisions, the “means of exchange” provisions, and the “significant issuer” provisions. This is especially surprising considering how popular these crypto-assets are, how volatile they are, and how fiercely they are criticised by many commentators.<sup>138</sup> Considering how often the draftsmen congratulate themselves for their “future-proof” work, it is especially surprising that they overlooked algorithmic crypto-currencies, which continue marketing themselves as “stable” yet seem to be anything but that.<sup>139</sup>

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<sup>135</sup> Arts 45(4) and 58(1)(a).

<sup>136</sup> See Recitals 40, 56, and 85.

<sup>137</sup> See L. BELSIE, *El Salvador's Experiment with Bitcoin as Legal Tender*, (2022) 7 *The NBER Digest* 4.

<sup>138</sup> K. COSTELLOE, *Bitcoin 'Ought to Be Outlawed,' Nobel Prize Winner Stiglitz Says*, in *Bloomberg.com* (29 November 2017). C. Parker, “Robert Shiller: Bitcoin is just an 'interesting experiment'” *World Economic Forum* (25 January 2018) <<https://www.weforum.org/agenda/2018/01/robert-shiller-bitcoin-is-just-an-interesting-experiment/>>. C. NEWLANDS, *Stiglitz, Roubini and Rogoff lead joint attack on bitcoin* *Financial News* (4 July 2018) <<https://www.fnlondon.com/articles/stiglitz-roubini-and-rogooff-lead-joint-attack-on-bitcoin-20180709>>.

K. CHIGLINSKY, *Avoid 'Evil' Bitcoin and Stay Sane: Investing Wisdom from Buffett and Munger*, in *Bloomberg.com* (2 May 2022).

<sup>139</sup> R. CLEMENTS, *Built to Fail: The Inherent Fragility of Algorithmic Stablecoins*, in (2021) 11 *Wake Forest Law Review Online* 131. W. ZHAO-H. LI-Y. YUAN, *Understand Volatility of Algorithmic Stablecoin: Modeling, Verification and Empirical Analysis*, in M. BERNHARD-A. BRACCIALI-L. GUDGEON-T. HAINES-A. KLAGES-MUNDT-S. MATSUO-D. PEREZ-M. SALA-S. WERNER (eds), *Financial Cryptography and Data Security*, Revised Selected Papers of the Financial

A fourth problem is one of appearance. The only case in which these provisions become necessary to preserve the EU's monetary sovereignty is if a significant number of persons deem it preferable to use crypto-assets instead of the Euro. Such a situation, however, would in all likelihood be indicative of some serious problem in the management of the Euro. One would then expect the EU to address that underlying monetary problem – and not, as MiCAR instead seems to do, to suppress freedom of choice, most outrageously by prohibiting the issue of crypto-assets. Intervening in the crypto-currency market may be a legitimate “plan B”, but the EU legislature seems to be entirely ignoring “plan A” – that is, the EU properly performing its monetary functions, succeeding in the currency market on its own merits, and preventing its monetary authority from being called into question in the first place.<sup>140</sup> This apparent self-doubt, on the EU's part, is quite unflattering.

### 3.1. *An overriding strategy*

The substantive problems identified – from the narrow scope of the “disproportionate burden” exceptions, to the ambiguous treatment of e-money tokens, to the EU's apparent self-doubt – seem to stem from the absence of an intelligible overriding strategy as to how crypto-assets should be regulated.

One key difficulty in regulating markets crypto-assets is that the socio-economic merits of crypto-assets are a controversial issue. One dimension to this controversy relates to the idea of monetary competition in general. Some argue that the State's monopoly of the currency market has “frozen” money in “its most primitive form”.<sup>141</sup> Others argue that wise monetary policy is highly valuable, and that monetary competition – even if it were possible – would undermine the

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Cryptography 2021 International Workshops, 5 March 2021 (Springer). L. WINTERMEYER, *From Hero To Zero: How Terra Was Toppled In Crypto's Darkest Hour*, in *Forbes* (25 May 2022) <<https://www.forbes.com/sites/lawrencewintermeyer/2022/05/25/from-hero-to-zero-how-terra-was-toppled-in-cryptos-darkest-hour/?sh=171a8466389e>>.

<sup>140</sup> Cf IMF (fn 18) paras 34-39.

<sup>141</sup> See fn 125.

proper administration of monetary policy.<sup>142</sup> Others still attempt to strike an intermediate position, arguing that the existence of private currencies, if kept in check by regulators, could enhance efficiency.<sup>143</sup> Another dimension to this controversy is specific to crypto-assets. Highly reputable voices have strongly criticised crypto-assets for lacking any inherent value and thus only lending themselves to speculation and fraud (where both are, impliedly, considered unmeritorious activities).<sup>144</sup> Indeed, the ESMA has gone as far as to imply that crypto-assets are “illegitimate”.<sup>145</sup> Others, especially within the crypto world, have taken a very different view, praising the DLT phenomenon for reducing the intermediary costs<sup>146</sup> and, relatedly, widening access to networks which were previously inaccessible to

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<sup>142</sup> See fn 126.

<sup>143</sup> See fn 127. See also Catalini et al (fn 124) 4, 6-11.

<sup>144</sup> S. RUSSOLILLO-E-Y JEONG, *Cryptocurrency Exchanges Are Getting Hacked Because It's Easy*, in *The Wall Street Journal* (16 July 2018) <<https://www.wsj.com/articles/why-cryptocurrency-exchange-hacks-keep-happening-1531656000>>. P. KRUGMAN, *Crypto Is Crashing. Where Were the Regulators?*, in *The New York Times* (11 July 2022) <<https://www.nytimes.com/2022/07/11/opinion/cryptocurrency-federal-reserve.html>>. P. KRUGMAN, *Is This the End Game for Crypto?*, in *The New York Times* (17 November 2022) <<https://www.nytimes.com/2022/11/17/opinion/crypto-banks-regulation-ftx.html>>. S. CECCHETTI-K. SCHOENHOLTZ, *Let crypto burn: Just say no to legitimacy-inferring regulation*, in *Financial Times* (19 November 2022) <<https://www.ft.com/content/ac058ede-80cb-4aa6-8394-941443eec7e3>>. See also fn 138.

<sup>145</sup> ESMA (fn 13) paras 88, 185.

<sup>146</sup> See D. MILLS-K. WANG-B. MALONE-A. RAVI-J. MARQUARDT-C. CHEN-A. BADEV-T. BREZINSKI-L. FAHY-K. LIAO-V. KARGENIAN-M. ELLITHORPE-W. NG-M BAIRD, *Distributed ledger technology in payments, clearing, and settlement*, in Finance and Economics Discussion Series 2016-095, Board of Governors of the Federal Reserve System (December 2016) <<https://doi.org/10.17016/FEDS.2016.095>>; C. CATALINI, et al (fn 124) 4, 6-11; S. CORBET, *Evaluating a decade of cryptocurrency development: Navigating financial progress through technological and regulatory ambiguity*, in S. CORBET-A. URQUHART-L. YAROVAYA (eds), *Cryptocurrency and Blockchain Technology*, Berlino, 2020, 189, 192. Cf D. EASLEY-M. O'HARA-S. BASU, *From mining to markets: The evolution of bitcoin transaction fees*, in (2019) 134 *Journal of Financial Economics* 91; IMF (fn 18) 9-10; E. BUDISH, *Trust at Scale: The Economic Limits of Cryptocurrencies and Blockchains*, Becker Friedman Institute Working Paper 2022-83 (December 2023).

some (“banking the unbanked”).<sup>147</sup> Others still take an intermediate view, recognising that the crypto phenomenon benefits society in some respects but, if left to its own devices, can damage society in other respects.<sup>148</sup> On this view – the easiest to defend – regulation necessarily entails a balancing exercise between, on one side, the risks of market failure which regulation seeks to correct and, on the other side, the risks of government failure which regulation introduces.

The problem is that MiCAR does not express any conclusive view as to the overall merits of crypto-assets, nor does it attempt to balance – in transparent terms – the conflicting interests at play. Instead, the EU legislature commits to a plethora of lofty objectives, from “support[ing] innovation and fair competition”, to “ensuring a high level of protection of retail holders and the integrity of markets in crypto-assets”, to “maintain[ing] the competitiveness of the Member States on international financial and technological markets and provid[ing] clients with significant benefits in terms of access to cheaper, faster and safer financial services and asset management”.<sup>149</sup> But, by aspiring to everything at once, the EU legislature aspires to nothing in particular.<sup>150</sup> At a micro level, the consequences of this lack of direction include the internally-inconsistent treatment of asset-referenced tokens and e-money tokens. At a macro level, MiCAR’s aimlessness is reflected in the responses which MiCAR as a whole has hitherto attracted. In

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<sup>147</sup> J. ENGLAND, *Crypto regulations and building financial inclusion*, in *FinTech Magazine* (24 April 2023) <<https://fintechmagazine.com/articles/crypto-regulations-and-building-financial-inclusion>>. Cf Y. FANUSIE, *Stop Saying You Want To Bank The Unbanked*, in *Forbes* (1 January 2021) <<https://www.forbes.com/sites/yayafanusie/2021/01/01/stop-saying-you-want-to-bank-the-unbanked/>>.

<sup>148</sup> See, for example, Christian Catalini’s body of work: C. CATALINI, *How Blockchain Applications Will Move Beyond Finance*, in *Harvard Business Review* (2 March 2017); C. CATALINI, *How Blockchain Technology Will Impact the Digital Economy*, in *Oxford Business Law Blog* (24 April 2017); C. TUCKER-C. CATALINI, *What Blockchain Can’t Do*, in *Harvard Business Review* (28 June 2018); C. CATALINI-GANS (fn 57); CATALINI *et al* (fn 124). See also B. CARSON-G. ROMANELLI, P. WALSH-A. ZHUMAEV, *Blockchain beyond the hype: What is the strategic business value?* in *McKinsey Digital* (19 June 2019).

<sup>149</sup> Recital 4.

<sup>150</sup> On the EU’s historical tendency to use “economic clichés” and delegated law-making to obscure the trade-offs which underlie legislative measures, see K. LAGENBUCHER, *Economic Transplants*, in (CUP 2017) ch 8.

particular, some have argued that MiCAR focuses on protecting investors and promoting innovation at the cost of taking a relaxed view to financial stability,<sup>151</sup> while others effectively make the inverse argument, that MiCAR is unduly restrictive towards markets and innovation.<sup>152</sup> Some have argued that the barriers to market entry created by MiCAR will unduly harm competition,<sup>153</sup> while others argue, quite to the contrary, that the white paper requirement, as detailed in MiCAR, is “very liberal”.<sup>154</sup>

MiCAR’s woolly approach to crypto-assets can be compared to the more principled stance taken in the US where, principally through the SEC’s enforcement actions<sup>155</sup> and to a lesser extent through legislative initiatives,<sup>156</sup> crypto markets are being heavily curtailed. This stance has attracted much criticism<sup>157</sup> but, at least, has the distinctive merits of coherence and transparency.

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<sup>151</sup> E. D. MARTINO, *Regulating Stablecoins as Private Money between Liquidity and Safety. The Case of the EU ‘Market in Crypto Asset’ (MiCA) Regulation*, in Amsterdam Law School Legal Studies Research Paper 2022-27.

<sup>152</sup> G. FERRARINI-P. GIUDICI, *Digital Offerings and Mandatory Disclosure: A Market-Based Critique of MiCA*, European Corporate Governance Institute Working Paper 605/2021; VAN DER LINDEN- SHIRAZI (fn 24) 24. See ALSO LENER-FURNARI (fn 83) 21; TOMCZAK (fn 10) 368-69.

<sup>153</sup> FURNARI-LENER (fn 20) 99; ANSIDERI (fn 23) 12.

<sup>154</sup> F. ANNUNZIATA (fn 18) 11. Cf C. FRIGENI (fn 23) 28-29.

<sup>155</sup> See fn 19. More comprehensively, see SEC, *Crypto Assets and Cyber Enforcement Actions*, in *SEC.gov* <<https://www.sec.gov/spotlight/cybersecurity-enforcement-actions>>.

<sup>156</sup> See, for example, the Crypto-Asset National Security Enhancement and Enforcement Act (S. 2355).

<sup>157</sup> J. BRITO, *The CANSEE Act is a messy, arbitrary, and unconstitutional approach to DeFi*, in *CoinCenter.com* (20 July 2023) <<https://www.coincenter.org/the-cansee-act-is-a-messy-arbitrary/>>; N. ANTHONY, *More Senators Target Financial Privacy with ‘CANSEE Act*, in *Cato at Liberty* (25 July 2023) <<https://www.cato.org/blog/more-senators-target-financial-privacy-cansee-act>>. See also the ongoing litigation between the SEC and Coinbase: D. MICHAELS-V. GE HUANG, *Judge Questions SEC’s Claim to Regulate Coinbase*, in *Wall Street Journal* (17 January 2024) <<https://www.wsj.com/finance/regulation/judge-questions-secs-claim-to-regulate-coinbase-ae2f240c>>.

#### 4. *Inherent issues*

Finally, there are problems with the very notion of the EU attempting to regulate markets in crypto-assets – regardless, that is, of exactly which activities are regulated by MiCAR and regardless of how exactly those activities are regulated. These problems are attributable, in short, to the fact that industry being regulated is consciously designed to escape regulation, and in fact possesses three features which could render traditional forms of regulation, like MiCAR, largely sterile.

##### 4.1. *The cross-border dimension*

At this point, to say that the crypto phenomenon transcends national borders is something of a banality.<sup>158</sup> In fact, this idea lies at the very heart of MiCAR's legal basis, Art 114 TFEU. In this respect, the EU legislature points out that, in the absence of Community-wide rules, there is a very real risk of national rules diverging. For Member States, the risk is of regulatory arbitrage undermining national regulation. For those who participate in crypto markets, the risk is of regulatory

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<sup>158</sup> MILLS *et al* (fn 146) 18-19; ESMA (fn 13) paras 9, 11; J. SARRA-L. GULLIFER, *Crypto-claimants and bitcoin bankruptcy: Challenges for recognition and realization* in (2019) 28 *International Insolvency Review* 233, 261; EXPERT GROUP ON REGULATORY OBSTACLES TO FINANCIAL INNOVATION, 30 *Recommendations on Regulation, Innovation and Finance*, Final Report to the European Commission (December 2019) 44, 58, and 70; A. URQUHART-L. YAROVAYA, *Introduction to cryptocurrencies*, in A. URQUHART-L. YAROVAYA (eds), *Cryptocurrency and Blockchain Technology*, Berlino, 2020, 3; S. CORBET-D. J. CUMMING, *The Wild West of ICOs*, in A. URQUHART-L. YAROVAYA (eds), *Cryptocurrency and Blockchain Technology*, Berlino, 2020; I. SALAMI, *Financial Crime Update*, in (2020) 35 *BJIBFL*, 496, 498; A. GURREA-MARTINEZ-N. REMOLINA, *Global Challenges and Regulatory Strategies to Fintech* in (2020) 36 *Banking & Finance Law Review*, 39; OECD (fn 53) 16 and 43; FINANCIAL STABILITY BOARD, *International Regulation of Crypto-asset Activities: A proposed framework – questions for consultation*, (11 October 2022); IMF, *Elements of effective policies for crypto-assets*, (February 2023) <<https://www.imf.org/-/media/Files/Publications/PP/2023/English/PPEA2023004.ashx>>; AGENZIA DELLE ENTRATE (fn 18) 12.

fragmentation distorting competition and, by creating uncertainty and complexity, imposing unnecessary costs.<sup>159</sup>

The EU legislature's argument would be perfectly sound, were it not that it focuses on the EU alone, overlooking the possibility of third countries setting out different regulatory regimes. On the one hand, those who wish to participate in crypto markets, if dissatisfied with MiCAR, may well have the opportunity to relocate to a third country, greatly weakening the effectiveness of MiCAR. Indeed, the EU legislature's haste in drawing up regulation may not play in the EU's favour, and may in fact draw issuers and CASPs – especially those of a significant size – away from the Continent. Admittedly, the recent developments in the US suggest that the stateside environment is not any friendlier to crypto enthusiasts. Nevertheless, some commercial actors may be especially put off by the aimlessness and ambiguity of MiCAR, and may actually prefer the harsher but clearer regime in place in the US.<sup>160</sup> Regardless, this is an opportunity for other jurisdictions to seize the opportunity which the EU and US seem to have foregone: the recent reforms in the UK, for example, require the domestic regulators to exercise their powers, “as far as reasonably possible”, to enhance the international competitiveness of the UK economy and foster its medium-to-long-term growth;<sup>161</sup> these duties, while rather open-textured, may find fertile ground in the crypto world.<sup>162</sup> On the other

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<sup>159</sup> Recitals 4-6 and 112. These justifications are echoed by other EU institutions and commentators: see ESMA-EBA-EIOPA, *FinTech: Regulatory Sandboxes and Innovation Hubs*, JC 2018 74, paras 95 and 110; E. NOBLE, (fn 18) 2, 9, 11, and 15.

<sup>160</sup> See G GENSLER, *Statement on the Approval of Spot Bitcoin Exchange-Traded Products*, SEC Statement (10 January 2024) <<https://www.sec.gov/news/statement/gensler-statement-spot-bitcoin-011023>>.

<sup>161</sup> See ss 1B-1EB and 2H FSMA 2000, amended by s 25 FSMA 2023. See also s 26 FSMA 2023.

<sup>162</sup> More aspirationally, see HM TREASURY, *Future financial services regulatory regime for cryptoassets: Response to the consultation and call for evidence*, October 2023, paras 4.14, 5.15, 6.3, 6.5, and 7.6. More concretely, see the Financial Conduct Authority's announcement, dated 11/03/2024, that it “will not object to requests from Recognised Investment Exchanges (RIEs) to create a UK listed market segment for cryptoasset-backed Exchange Traded Notes” <[131](https://www.fca.org.uk/news/statements/fca-updates-position-cryptoasset-exchange-traded-notes-professional-investors#:~:text=The%20Financial%20Conduct%20Authority%20(FCA,Exchange%20Traded%20Notes%20(cETNs))></a>>.</p>
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hand, those who wish to engage in a crypto activity across the EU's external border remain vulnerable to the complexity and uncertainty of regulatory fragmentation, for example in relation to the MiCAR-MiFID divide. These are the same sort of concerns which justified MiCAR in the first place.

Undeniably, the EU's regulatory jurisdiction is limited, and the EU cannot single-handedly lay down a global regime for markets in crypto-assets. Nevertheless, there is much that the EU can do, instead of simply devising a self-centred regulatory regime like MiCAR, to properly address the cross-border dimension of crypto-assets. Many institutions, for instance, have argued that resources should be spent on developing a single international attempt at regulation<sup>163</sup> or, at least, on developing procedures for different regulators to engage in dialogue and coordinate their efforts.<sup>164</sup> MiCAR does set out some mechanisms to involve the regulatory authorities of third countries in the enforcement of MiCAR. However, those mechanisms are limited and, moreover, are primarily phrased as if they were concessions, on the EU's part, towards third countries, which does not appear to be a tone conducive to fruitful collaboration.<sup>165</sup> Similarly, Art 140(2)(v) leaves the door open for an equivalence regime, but depicts it as a rather remote possibility.

Another worthwhile exercise would be to lay down the linguistic, conceptual, and strategic foundations on which regulatory efforts – both Community-level and more broadly international – ought to be based.<sup>166</sup> Rather than describing crypto-assets as “representations”, for

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<sup>163</sup> ASIAN DEVELOPMENT BANK, *Distributed Ledger Technology and Digital Assets: Policy and Regulatory Challenges in Asia*, June 2019, in <<https://dx.doi.org/10.22617/TCS190205-2>> 15, 32-33; FINANCIAL STABILITY BOARD, *Assessment of risks to financial stability from crypto-assets*, February 2022, in <<https://www.fsb.org/wp-content/uploads/P160222.pdf>>; IMF (fn 158).

<sup>164</sup> ESMA et al (fn 159) paras 94.c and 96 and Section 3; FSB (fn 163); OECD (fn 53) 3, 14, and 43; IOSCO, *Policy Recommendations for Decentralized Finance (DeFi)*, CR/04/2023, September 2023. Cf. a more realist description: G. GENSLER, *Lecture 8: Public Policy*, in *MIT 15.S12 Blockchain and Money*, Fall 2018, MIT OpenCourseWare <<https://www.youtube.com/watch?v=sMnB10g3Ev4&list=PLUI4u3cNGP63UUkFL0onkxF6MYgVa04Fn&index=9&t=1889s>> 30:05-33:25.

<sup>165</sup> Arts 119-20, 126-128. See Zetzsche et al (fn 18) 224-25.

<sup>166</sup> See the emphasis on consistent international terminology in ASIAN DEVELOPMENT BANK (fn 163) 33. See also IMF (fn 18) 8.



example, there is an argument that MiCAR should have made reference to established legal concepts, or at least should have attempted too. Are crypto-assets the subject-matter of proprietary interests? Are they proprietary interests themselves? Are they obligations, or perhaps bundles of obligations?<sup>167</sup> Here, the main obstacle is that the EU's competences are limited and, although the precise limits of Art 114 TFEU are not perfectly settled, interfering with Member States' foundational legal concepts would appear to fall decidedly outside of EU legislator's lawful remit.<sup>168</sup> Nevertheless, there could be more modest tasks – more technical in nature – which the EU legislature might consider. Rather than referring to “DLT or similar technologies” and then leaping to setting out detailed rules for an essentially undefined subject-matter, for instance, it could be more fruitful for the EU to spend its resources ascertaining, with some degree of precision, what the essential technological features of crypto-assets are. In addition, distributed ledgers have unique features – like miners, forks, and developers – and one would expect that regulation would focus on – or at least mention – these distinctive characteristics.

#### 4.2. Decentralisation

An even more general issue is that MiCAR, like traditional forms of regulation, seeks to influence market behaviour by targeting key market

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<sup>167</sup> For a cursory attempt at conceptualising crypto-assets, see EBA (fn 15) para 62. Fuller – but controversial – attempts include UK JURISDICTION TASKFORCE, *Legal Statement on Cryptoassets and Smart Contracts*, 18 November 2019; Law Commission (fn 7).

<sup>168</sup> See, among others, D. WYATT, *Community Competence to Regulate the Internal Market*, in M. DOUGAN-S. CURRIE (eds), *Fifty Years of the European Treaties: Looking Back and Thinking Forward*, Oxford, 2009; K. ST CLAIR BRADLEY, *Powers and Procedures in the EU Constitution: Legal Bases and the Court*, in P. CRAIG-G. DE BÚRCA (eds), *The Evolution of EU Law<sup>2</sup>*, Oxford, 2011; P. CRAIG, *The ECJ and Ultra Vires Action: a Conceptual Analysis*, in (2011) 48 CMLRev 395; S. WEATHERILL, *The limits of legislative harmonisation ten years after Tobacco Advertising: how the Court's case law has become a “drafting guide”*, in (2011) 12 German Law Journal 827; HM Government, *Review of the Balance of Competences Between the United Kingdom and the European Union: The Single Market* (July 2013) <[https://assets.publishing.service.gov.uk/media/5a7b875640f0b62826a04299/2901084\\_SingleMarket\\_acc.pdf](https://assets.publishing.service.gov.uk/media/5a7b875640f0b62826a04299/2901084_SingleMarket_acc.pdf)> ch 2; P Craig and G de Búrca, *EU Law: Text, Cases, and Materials* (7<sup>th</sup> edn OUP 2020) ch 4.

participants, while the very ethos of crypto markets lies in decentralisation.<sup>169</sup> In addition to the legalistic issues examined in section 2.4 – that the precise scope of Title V is unclear – MiCAR’s traditional approach to regulation gives rise to two more fundamental policy problems.

One problem is that fully decentralised markets are still vulnerable to systemic risks<sup>170</sup> and may still be vitiated by power imbalances, yet are left completely unregulated.<sup>171</sup> One might reply that, at least for the foreseeable future, the decentralised ethos is simply not in line with market practice: crypto markets are still quite centralised, even among sophisticated users,<sup>172</sup> who still find it convenient to rely to some degree on intermediaries, and those intermediaries are amenable to traditional regulation. However, it still does not follow that regulators’ resources are best spent drawing up regulation of the traditional sort. First, there is the possibility of crypto users developing a greater familiarity with the technical aspects of DLT, of acquiring better hardware, or of obtaining access to better DLT user interfaces, and thus emancipating themselves from intermediaries. Importantly, it would be myopic for regulators to wait until that switch occurs before starting to think about appropriate regulation, especially because devising non-traditional regulation is not a trivial task. If non-traditional regulation is necessary, discussions ought to start now. From this perspective, MiCAR does

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<sup>169</sup> See GENSLER (fn 164) 46:35-48:20. Cf the emphasis on “institutions” and “firms” in J. ARMOUR-D. AWREY-P. DAVIES-L. ENRIQUES-J. N. GORDON-C. MAYER-J. PAYNE, *Principles of Financial Regulation* (OUP 2016), for example at 15, and in D. LLEWELLYN, *The Economic Rationale for Financial Regulation*, FSA Occasional Paper Series, April 1999, especially at 5-7. Among the literature on gatekeeper theory, see R. KRAAKMAN, *Gatekeepers: The Anatomy of a Third-Party Enforcement Strategy*, in 1986) 2 JL Econ & Org 53; A. TUCH, *The Limits of Gatekeeper Liability*, in (2016) 73 Wash & Lee L Rev 619.

<sup>170</sup> See S. L. SCHWARCZ, *Systemic Risk*, in (2008) 97 Geo LJ 193, 200.

<sup>171</sup> OECD (fn 53).

<sup>172</sup> GENSLER (fn 69) 48:25-49:35; A. R. SAI-J. BUCKLEY-B. FITZGERALD-A. LE GEAR, *Taxonomy of centralization in public blockchain systems: A systematic literature review*, in (2021) 58(4) Information Processing and Management, Article 102584, 25-28; C. CAMPAJOLA-R. CRISTODARO-F. M. DE COLLIBUS-T. YAN-N. VALLARANO-C. J. TESSONE, *The Evolution Of Centralisation on Cryptocurrency Platforms*, in (3 May 2023) <<https://arxiv.org/pdf/2206.05081.pdf>>; BIS, *The crypto ecosystem: key elements and risks*, Report submitted to the G20 Finance Ministers and Central Bank Governors (July 2023) 6, 9-11.

require the Commission to assess “the necessity and feasibility of regulating decentralised finance”, but does not provide any insight as to how a fully decentralised market might possibly be regulated.<sup>173</sup> Second, traditional regulation may have self-defeating effects. By targeting crypto intermediaries, regulation like MiCAR imposes cost on those intermediaries, and those costs are likely to be passed on, in part, to the crypto users who deal with those intermediaries. It follows that, to some extent, traditional regulation crowds out centralised markets, accelerating the move towards decentralised markets and therefore prejudicing its own long-term viability. This point is demonstrated by the demise of Libra/Diem: the crypto-currency would have been controlled by a range of high-profile entities – from Meta to Visa – and would have thus constituted for regulators a highly valuable foothold in crypto markets; yet, the project was ultimately aborted, ironically, due to the incessant political and regulatory pressure which ultimately exasperated investors.<sup>174</sup> Admittedly, MiCAR does actually contribute to centralisation in so far as it sets out special, leaner requirements for recognised credit institutions to the detriment of new entrants into the market. Nevertheless, this choice also reduces the competitiveness of centralised markets and may well lead to inefficiencies, further incentivising the move towards decentralisation.

Another problem is that regulation like MiCAR tends to overestimate the influence which intermediaries currently have on crypto-markets. Issuers, for instance, can refrain from granting interest, can stop issuing tokens, and can even submit a plan to reduce the number and value of transactions, but what people do with their own crypto-assets is out of the issuers’ hands. By way of illustration, *SEC v Ripple* – a judgment quite reassuring for crypto enthusiasts – gave rise to the risk of scammers exploiting investors’ excitement; however, there was nothing which Ripple itself – the issuer – could do to affect the distributed ledger, and all it could do to hinder fraudsters was turn to Twitter to caution users against misinformation.<sup>175</sup> Indeed, many crypto-assets do not have issuers at all – as in the case of Bitcoin – and

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<sup>173</sup> Art 142(2)(a).

<sup>174</sup> H. MURPHY-K- STACEY, *Facebook Libra: the inside story of how the company’s cryptocurrency dream died*, in *The Financial Times* (10 March 2022) <<https://www.ft.com/content/a88fb591-72d5-4b6b-bb5d-223adfb893f3>>.

<sup>175</sup> <<https://twitter.com/JoelKatz/status/1679635456915550208>>.

MiCAR’s ability to govern those markets is thus severely impaired. Similarly, CASPs are not essential for crypto users and, regardless, are providing services in an increasingly decentralised manner, without a central legal person capable of bearing regulatory obligations.

The question, then, is what forms of regulation could be implemented instead. One option is to govern the behaviour of each and every market participant – impracticable. A second option is to look behind decentralised platforms and search for a market actor who controls those exchanges and whose conduct can be governed. Aside from the practical difficulties in identifying such a market actor,<sup>176</sup> this market actor would simply not exist in a properly decentralised system. A third option is to “target the ‘whales’, i.e., anyone holding more than X amount of Bitcoins would be subject to regulation (analogously to rules applying to controlling shareholders)”. One difficulty is that, as with controlling shareholders, a threshold requirement “might be easy to get around”. Another difficulty is that, by “discouraging the acquisition of a dominant position”, this form of regulation would again crowd out its own target audience.<sup>177</sup> A fourth option is to focus on “validators”, who “jointly decide which transactions are admissible” into the distributed ledger.<sup>178</sup> However, the influence of validators is limited, as their current role simply consists of implementing pre-determined scripts against each new entry, leaving no space for discretion. A fifth option, therefore, is to focus on developers, who “are charged with writing and updating the code that runs the blockchain”.<sup>179</sup> Yet, for most DLTs, the pool of developers changes quite often, especially for open-source ledgers like Bitcoin. For regulation to keep up with these changes may prove rather difficult. More importantly, developers are not tyrants: firstly, because most maintenance initiatives are taken, as a matter of practice, only after users have voted on the

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<sup>176</sup> ESMA (fn 13) paras 130, 136, and 147. IOSCO (fn 164) 110.

<sup>177</sup> H. Y. JABOTINSKY-R. SAREL, *How Crisis Affects Crypto: Coronavirus as a Test Case*, in (2023) 74 *Hastings Law Journal* 433, 462-63.

<sup>178</sup> I. MAKAROV-A. SCHOAR, *Cryptocurrencies and Decentralized Finance (DeFi)*, (2022) *Brookings Papers on Economic Activity*, 141, 146, 189-91. In the article, “validators” is used to refer to those who act as validators (in a narrow sense) in proof-of-stake ledgers and those who act as miners in proof-of-work ledgers – even though ordinary nodes are validators too, in a broader sense.

<sup>179</sup> *Ibid* 182, 189-91.

matter;<sup>180</sup> secondly, because distributed ledgers are based on consensus, meaning that their rules can be modified only if nodes voluntarily adopt the change.<sup>181</sup> Regulation which governs the conduct of developers is therefore a very blunt tool to govern the conduct of other stakeholders. A sixth – and less traditional – option is “on-chain regulation” or “regulation by code”. Regulators would have access to distributed ledgers and would, for example, “design an algorithm that tries to detect market manipulation and block such transactions”.<sup>182</sup> But, again, this model ignores the consensus-based character of DLT: regulators can publish whatever scripts they see fit but, if nodes do not voluntarily accept those scripts, those scripts are only – quite literally – a waste of space. Distributed ledgers can be used to good effect by regulators, but only to enhance supervision and monitoring.<sup>183</sup>

A seventh option, and what appears to be the most promising, is for regulators to focus on the current key market participants but, rather than merely imposing burdens – requiring publication of a white paper, restricting the issue of crypto-assets, and demanding various reports – additionally offering some sort of benefit to well-behaving crypto intermediaries. One advantage of this arrangement is that it would weaken the incentive for intermediaries to attempt to evade regulation, reducing the burden borne by supervisors. Another advantage is that the

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<sup>180</sup> See “Blockchain voting” <<https://www.coindesk.com/tag/blockchain-voting/>>.

<sup>181</sup> NAKAMOTO (fn 57) 8. See the failure of Bitcoin Improvement Proposal (BIP) 64 and BIP 101: M. HEARN, *Why is Bitcoin forking?*, in *Medium.com* (15 August 2015) <<https://medium.com/faith-and-future/why-is-bitcoin-forking-d647312d22c1>>; C. METZ, *The Bitcoin Schism Shows the Genius of Open Source*, in *WIRED.com* (19 August 2015) <<https://www.wired.com/2015/08/bitcoin-schism-shows-genius-open-source/>>; B. COHEN, *Whiny Ragequitting*, in *Medium.com* (16 January 2016) <<https://bramcohen.medium.com/whiny-ragequitting-cab164b1e88>>; “Bitcoin XT Nodes Summary” *Coin.dance.com* <<https://coin.dance/nodes/xt>>. See also other protocols which, instead of failing entirely, were adopted by some – but not all – nodes, creating a fork in Bitcoin: J. KELLY, *Bitcoin’s repeated splits undermine its long-term value*, in *Financial Times* (18 November 2018) <<https://www.ft.com/content/20b702d0-e9ae-11e8-a34c-663b3f553b35>>.

<sup>182</sup> R. SARE-H. Y. JABOTINSKY-I. KLEIN, *Globalize Me: Regulating Distributed Ledger Technology*, in (2023) 56 *Vanderbilt Journal of Transnational Law*, 435, 477-78.

<sup>183</sup> R. AUER, *Embedded supervision: how to build regulation into decentralised finance*, BIS Working Paper 811 (September 2019, revised May 2022).

benefits offered to intermediaries may well be passed on, in part, to users, weakening the appeal of decentralisation and improving the long-term prospects of this arrangement. Furthermore, provided that regulators do not discriminate in offering benefits to crypto intermediaries, this option might actually reduce the barriers to market entry faced by challenger intermediaries, fostering competition. Indeed, intermediaries may even compete for access to regulation. However, this course of action is not free from obstacles. Chiefly, it is difficult to identify a suitable benefit which regulators might offer. For instance, proof-of-work DLT are notorious for their high energy consumption and, in light of the increasing environmental regulation, regulators might offer preferential treatment to honest and diligent intermediaries. Yet, this option presupposes strong environmental regulation and, regardless, would be undermined by the crypto world's move towards proof-of-stake, which does not consume as much energy.<sup>184</sup> Alternatively, if public institutions were to themselves become crypto users, regulators might determine that only well-behaved intermediaries shall have access to institutional clients. However, the pool of institutional clients is limited and, regardless, institutions might wish to avoid relying on crypto intermediaries. Another obstacle is that the balance between regulatory burdens and benefits is a difficult one to strike. There is an egregious risk of regulators and intermediaries colluding, calling for especially robust systems of accountability. Lastly, in the absence of international coordination, there is a significant risk of regulators competing among themselves.

#### 4.3. *Anatomy*

The last – and possibly gravest – problem is that one of the key aspirations of the crypto world is anonymity, and this distinctive feature makes the consistent enforcement of legal norms virtually

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<sup>184</sup> “What is proof of stake?” *McKinsey* (3 January 2023) <<https://www.mckinsey.com/featured-insights/mckinsey-explainers/what-is-proof-of-stake>>. A. Castor, “Ethereum moved to proof of stake. Why can't Bitcoin?” *MIT Technology Review* (28 February 2023) <<https://www.technologyreview.com/2023/02/28/1069190/ethereum-moved-to-proof-of-stake-why-cant-bitcoin/>>.

impossible.<sup>185</sup> What happens, for example, if an anonymous entity offers crypto-assets to the public without publishing a white paper? EU authorities would not know the identity or location of any person which might lie behind that entity, let alone visit a sanction upon that person. Indeed, EU authorities would not even know whether there is a person behind that entity at all, or whether it is simply a line of code, whose coder might have died or might even be a form of generative AI. And what happens if a crypto-currency proves so popular that it begins to supplant the Euro as means of exchange and store of value? How could authorities possibly impose penalties on the millions of its anonymous users? Under Art 76(3), CASPs who operate a trading platform are under a duty to implement rules which prevent the trading of crypto-assets with an in-built anonymisation function – but what happens if a trading platform itself is run anonymously? There is nothing new under the sun, as this corresponds exactly with the well-established ambition of many mainstream crypto enthusiasts: “We want bitcoin to work even where it’s not legally recognised as being money, and our goal is to make it like money.”<sup>186</sup>

Crucially, anonymity is not simply a crypto slogan. It is possible in practice, and is now more accessible than ever. From mixers, to coinjoin, to coinshuffle, the mechanisms available to conceal who holds what on UTXO-based ledgers – like Bitcoin – have been steadily improving, redressing issues of adverse selection and reducing the interactions necessary between different parties.<sup>187</sup> Meanwhile,

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<sup>185</sup> GENSLER (fn 164) 45:05-45:25; FURNARI-LENER (fn 20) 104; MAKAROV-SCHOAR (fn 178) 12, 28-29; SAREL *et al* (fn 182) 36.

<sup>186</sup> DRYJA (fn 21) 10:00-10:15.

<sup>187</sup> *Ibid.* D. DEUBER- D. SCHRÖDER, *CoinJoin in the Wild*” in E. BERTINO-H.SCHULMAN-M. WAIDNER (eds), *Computer Security-ESORICS 2021*, Proceedings of the 26th European Symposium on Research in Computer Security, Darmstadt, 4-8 October 2021, Part II (Springer). S. GOMZIN, *Crypto Basics* (Apress 2022) 97-117. H JONES, *Crypto must end anonymity for illicit finance, U.S. regulator says*, in *Reuters* (25 April 2023) <<https://www.reuters.com/technology/crypto-must-end-anonymity-illicit-finance-us-regulator-says-2023-04-25/>>. Cf M. POLASIK-A. I. PIOTROWSKA, T. P. WISNIEWSKI-R. KOTKOWSKI-G. LIGHTFOOT, *Price Fluctuations and the Use of Bitcoin*, in (2016) 20 *International Journal of Electronic Commerce*, 9, 15, 20. However, the main evidence adduced by Polasik et al to call into question the anonymity available on Bitcoin is the closure of Silk Road by US authorities, which dates back to 2013 – prehistoric, in the crypto timeframe. Cf also J. PAKKI-Y. SHOSHITAISHVILI-R. WANG-T. BAO-A. DOUPÉ, *Everything You Ever Wanted to Know*

distributed ledgers like Monero and Zcash have been designed, from the ground up, to ensure the highest level of anonymity.<sup>188</sup> Indeed, the success of crypto anonymity – and the perils of abusing that anonymity – are demonstrated by the use of DLT by pre-eminent radical groups to bypass international sanctions and secure funding.<sup>189</sup> This is why the crypto industry is unique. Bicycle thieves conceal their identity too, and the bicycle-theft industry as a whole is consciously designed to evade the criminal law, but thieves are nonetheless habitually caught. Regulation like MiCAR is unlikely to be backed by the same level of enforcement, therefore is less likely to effectively guide behaviour.

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*About Bitcoin Mixers (But Were Afraid to Ask)* in N. BORISOV-C. DIAZ (eds) *Financial Cryptography and Data Security*, Revised Selected Papers of the 25th International Conference on Financial Cryptography, 1-5 March 2021, Part 1 (Springer), which suggest that the security features proposed by academics are not deployed by the more popular mixers.

<sup>188</sup> On Monero, see Y. LI, G. YANG-W. SUSILO-Y. YU-M. H. AU-D. LIU, *Traceable Monero: Anonymous Cryptocurrency with Enhanced Accountability*, in (2021) 18 *IEEE Transactions on Dependable and Secure Computing*, 679. See also GOMZIN (fn 187) 119-137. On Zcash, commentators are more critical: G. KAPPOS-H. YOUSAF, M. MALLER-S. MEIKLEJOHN, *An Empirical Analysis of Anonymity in Zcash*, in (2018) *May Computing Research Repository* <[https://discovery.ucl.ac.uk/id/eprint/10055500/1/PDFsam\\_Kappos\\_sec18\\_full\\_proceedings.pdf](https://discovery.ucl.ac.uk/id/eprint/10055500/1/PDFsam_Kappos_sec18_full_proceedings.pdf)>; Z. ZHANG-W. LI-H. LIU-J. LIU, *A Refined Analysis of Zcash Anonymity*, in (2020) 8 *IEE Access*, 31845. On Origami, a zero-history DLT, see J. ALUPOTHA-X. BOYEN-M. MCKAGUE, *Zero-History Confidential Chains with Zero-Knowledge Contracts: A New Normal for Decentralized Ledgers?*, in V. ATLURI-R. DI PIETRO-C. D. JENSEN-W. MENG (eds), *Computer Security-ESORICS 2022*, Proceedings of the 27th European Symposium on Research in Computer Security, Copenhagen, 26-30 September 2022, Part 1 (Springer).

<sup>189</sup> Most recently, A. BERWICK-I. TALLEY, *Hamas Militants Behind Israel Attack Raised Millions in Crypto*, in *The Wall Street Journal* (10 October 2023) <<https://www.wsj.com/world/middle-east/militants-behind-israel-attack-raised-millions-in-crypto-b9134b7a>>; E. LIVNI-J. NOCERA, *Is Crypto Financing Terrorism?*, in *The New York Times* (28 October 2023) <<https://www.nytimes.com/2023/10/28/business/dealbook/is-crypto-financing-terrorism.html#:~:text=Because%20crypto%20is%20anonymous%2C%20borderless,for%20fund%2Draising%20by%20terrorists>>. Earlier, A. S. M. IRWIN-G. MILAD, *The use of crypto-currencies in funding violent jihad*, in (2016) 16 *Journal of Money Laundering Control* 407; UN ANALYTICAL SUPPORT AND SANCTIONS MONITORING TEAM, *Thirty-first report of the Analytical Support and Sanctions Monitoring Team submitted pursuant to resolution 2610 (2021) concerning ISIL (Da'esh), Al-Quaida and associated individuals and entities*?, S/2023/95.



This problem is by no means limited to MiCAR. Indeed, MiCAR was conceived, and is best read, in conjunction with Regulation (EU) 2023/1113, which extends the existing EU anti-money-laundering regime to crypto-assets and coordinates it with the requirements laid down in MiCAR. Regulation (EU) 2023/1113 openly recognises the unique problem of anonymity of the crypto world, and hence requires payment service providers and CASPs to obtain and share certain information about originators and beneficiaries.<sup>190</sup> While this measure doubtlessly buttresses MiCAR to some degree, one can still question whether it is sufficient. Firstly, if traditional regulation risks crowding-out the very gatekeepers on which it relies, it would seem that further increasing the regulatory burdens borne by CASPs may aggravate MiCAR's long-term prospects. Secondly, there is still the risk of CASP themselves embracing anonymity and thus severely undermining the chances of enforcing the obligations imposed by Regulation (EU) 2023/1113. More broadly, law-enforcement authorities are not new to the problem of anonymity, and their efforts may give rise to a cryptographic arms race. However, this race may prove especially trying for the public sector, which has vast resources but would be starting this race 15 years after its competitor, which instead lacks bureaucratic restraints and has a sizeable economic incentive to maintain its current advantage.

This is not to say that regulation like the Digital Finance package is entirely sterile. In so far as a market participant reveals his identity – as is the case for the most popular CASPs – it exposes itself to the risk of enforcement, therefore is likely to obey regulation. Accordingly, MiCAR does not only bark, and may often also bite. Yet, it can only bite those who are willing to be bitten, and there is no guarantee that commercial actors will continue to risk being bitten for long. These difficulties strengthen the argument for positive-incentives-based

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<sup>190</sup> On the rationale behind Regulation (EU) 2023/1113, see Recitals 17, 25, and 44; ECB, *Opinion of the European Central Bank of 30 November 2021 on a proposal for a regulation to extend traceability requirements to transfers of crypto-assets*, CON/2021/37; S. ALLEGREZZA, *European Strategies against Money Laundering: A Critical Overview of Current and Future Enforcement*, in J. CRIJNS-M. HAENTJENS-R. HAENTJENS (eds), *The Enforcement of EU Financial Law* (Hart 2022); J. Poulle-A. KANNAN-N. SPITZ-S. KHAN-A SOTIROPOULOU, *EU Banking and Financial Regulation* (Elgar 2024) part XII.

regulation which, while complicated, could circumvent the critical problem of anonymity.

### *5. Conclusion*

In short, MiCAR was a Herculean legislative project, and in fact does not live up to the EU legislature's high-minded ambitions. MiCAR's scope is not wholly clear, its different provisions are difficult to reconcile with each other, and its regulatory approach is out of line with the industry being regulated. These shortcomings are in part attributable to the novelty and uncertainty of the crypto phenomenon, but this does not change the fact that they appear to be serious legislative failures, difficult to reconcile with the EU's commitment to high-quality legislation.

In this light, it seems that the EU legislature's primary justification for adopting MiCAR in its current form is that defective regulation is better than no regulation at all. This may be true but, even if it is, it does not relieve the EU legislature of further responsibility: enacting MiCAR might have placed the EU ahead of other jurisdictions, but there is still significant room for improvement; if the EU wants to maintain its supposed advantage, it therefore ought to keep its foot on the gas. What is now required is a range of improvements, most of which concern fundamental issues, and many of which involve controversial political choices. This, it seems, is not the sort of responsibility which can be legitimately left to a technical body, and instead calls for the legislative process<sup>191</sup>.

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<sup>191</sup> To a similar effect, MAUME (fn 23) 252.