universität wien

Exposé

for the doctoral thesis

„The Dichotomy of European Blockchain Regulation"

submitted by

Mag. iur. Fabian Schinerl

Aspired academic degree:

Doktor der Rechtswissenschaften (Dr. iur.)

Supervisor:

Univ.-Prof. Dr. iur. Matthias Lehmann, D.E.A. (Paris II), LL.M., J.S.D. (Columbia)

Department for European, International and Comparative Law

Vienna, October 2022

Field of study:	Rechtswissenschaften
Degree programme code:	UA 783 101
Field of dissertation:	Öffentliches Wirtschaftsrecht
Matriculation number:	11704687

Table of Contents

Introduction

Crypto-assets have been on the market for more than a decade[1], but it is only recently that efforts to regulate them have risen to the top of the political agenda.[2] This is partly because regulators worldwide are concerned about the emergence of global stablecoins ('GSCs') – and for good reason: in mid-June 2019 Facebook (now: Meta) proposed to launch its Libra Coin (later renamed into Diem), which would significantly challenge monetary sovereignty of states and their financial stability.[3] A reaction from public authorities was not long in coming. On a

---

1 The Bitcoin whitepaper was first published on 1 November 2009 by the pseudonym Satoshi Nakamoto in an email on the Cryptography Mailing List; a copy can be found here, see Satoshi Nakamoto, 'Bitcoin: A Peer-to-Peer Electronic Cash System' <https://bitcoin.org/bitcoin.pdf> accessed 6 October 2022.

2 See EU Commission, 'Digital finance package' (24 September 2020) <https://finance.ec.europa.eu/publications/digital-finance-package_en> accessed 6 October 2022; FSB, 'Assessment of Risks to Financial Stability from Crypto-assets' (16 February 2022) <www.fsb.org/wp-content/uploads/P160222.pdf> accessed 6 October 2022; FATF, 'Updated Guidance for a Risk-Based Approach to Virtual Assets and Virtual Asset Service Providers' (2021) <www.fatf-gafi.org/media/fatf/documents/recommendations/Updated-Guidance-VA-VASP.pdf> accessed 6 October 2022; the Australian government launched a consultation on a proposed Digital Services Act to cover crypto-asset service provider, see Australian Government, 'Crypto asset secondary service providers: Licensing and custody requirements' (21 March 2022) <https://treasury.gov.au/sites/default/files/2022-03/c2022-259046.pdf> accessed 6 October 2022; Singapore has recently issued a updated Financial Services and Markets Bill, addressing regulatory weaknesses with regard to crypto-assets, see Financial Services and Markets Act 2022, Government Gazette No. 17, 2022; see Gesetz vom 3. Oktober 2019 über Token und VT-Dienstleister, li-LGBl No. 2019/301; for the US see National Conference of Commissioners on Uniform State Laws, 'Uniform Regulation of Virtual-Currency Businesses Act' (9 October 2017) <www.uniformlaws.org/HigherLogic/System/DownloadDocumentFile.ashx?DocumentFileKey=ca527d52-9bcf-15b0-b1c1-279b55b53fa4&forceDialog=0 > accessed 7 October 2022; and many more.

3 Dirk A. Zetzsche, Ross P. Buckley and Douglas W. Arner, 'Regulating LIBRA: The Transformative Potential of Facebook's Cryptocurrency and Possible Regulatory Responses' (2021) 41(1) Oxford Journal of Legal Studies 80.

global level, the Group of Seven ('G7'), the International Monetary Fund ('IMF') and the Bank for International Settlement ('BIS') quickly established a working group, which published its impact report in October 2019, stating 'that no global stablecoin project should begin operation until the legal, regulatory and oversight challenges and risks […] are adequately addressed'.[4]

Apart from the prominent example of Libra and other potential GSCs, crypto-assets in general have emerged from the fringes of the economy and slowly began to enter mainstream presence as a speculative investment and a potential means of payment.[5] To get a better picture, the EU Commission invited the European Banking Authority ('EBA') and the European Securities and Markets Authority ('ESMA') to undertake additional research on EU financial services law with regard to its applicability and suitability for crypto-assets.[6] In January 2019, the EBA and ESMA published their reports[7] concluding that 'beyond EU legislation aimed at combating money laundering and terrorism financing – most crypto-assets fall outside the scope of EU financial services legislation and therefore are not subject to provisions on consumer and investor protection and market integrity, among others, although they give rise to these risks'.[8] Furthermore, EBA and ESMA have jointly noted that the use of crypto-assets has developed rapidly in the last couple of years, not only in terms of transactional volume but also in terms of use cases.[9] The mandate was clear: The EU must take action.

---

4 G7 Working Group on Stablecoins, 'Investigating the impact of global stablecoins' (October 2019) 3 <www.bis.org/cpmi/publ/d187.pdf> accessed 6 October 2022.

5 Results from the ECB´s Consumer Expectation Survey (CES) indicate that around 10% of EU household own crypto-assets, see Lieven Hermans et al., 'Decrypting financial stability risks in crypto-asset markets' (May 2022) Special Feature A, ECB Financial Stability Review; Dirk A. Zetzsche, Ross P. Buckely, Douglas W. Arner and Linus Föhr, 'The ICO Gold Rush: It's a Scam, It's a Bubble, It's a Super Challenge for Regulators' (2019) 60(2) Harvard International Law Journal 267.

6 Communication from the Commission to the European Parliament, the Council, the European Central Bank, the European Economic and Social Committee and the Committee of the Regions, FinTech Action plan: For a more competitive and innovative European financial Sector, COM(2018) 109 final.

7 EBA, 'Report with advice for the European Commission on crypto-assets' (9 January 2019) <www.eba.europa.eu/sites/default/documents/files/documents/10180/2545547/67493daa-85a8-4429-aa91-e9a5ed880684/EBA%20Report%20on%20crypto%20assets.pdf?retry=1> accessed 6 October 2022; ESMA, Advice Initial Coin Offerings and Crypto-Assets, ESMA50-157-1391.

8 European Commission, Proposal for a Regulation of the European Parliament and of the Council on Markets in Crypto-assets, and amending Directive (EU) 2019/1937, COM(2020) 593 final, Explanatory Memorandum 1.

9 EBA, 'Report with advice for the European Commission on crypto-assets' (9 January 2019) ch 1.2, paras 5–7 <www.eba.europa.eu/sites/default/documents/files/documents/10180/2545547/67493daa-85a8-4429-aa91-

In an effort to 'boost Europe's competitiveness and innovation in the financial sector, paving the way for Europe to become a global standard-setter',[10] the European Commission initiated formal proceedings with the objective of establishing a fully harmonized, comprehensive and binding legal framework for the crypto-economy.[11] After extensive consultations with stakeholders,[12] the European Commission published its digital finance strategy ('DFS 2020') on 24 of September 2020.[13] The DFS 2020 proposes a common EU framework on Markets in Crypto-Assets ('MiCAR'),[14] a pilot regime for market infrastructures based on distributed ledger technology ('DLT pilot regime'),[15] a regulatory framework on digital operational resilience ('DORA')[16] as well as amendments to already existing EU financial services law.[17] Within the DFS 2020, MiCAR plays a dominant role, setting out the world's first comprehensive framework for regulating the crypto economy, with the potential to provide global standards for the oversight and regulation of crypto-assets. Recently, on 5 October 2022, the European Commission, the Council of the EU, and the European Parliament have reached an agreement in an informal

---

e9a5ed880684/EBA%20Report%20on%20crypto%20assets.pdf?retry=1> accessed 6 October 2022; ESMA, Advice Initial Coin Offerings and Crypto-Assets, ESMA50-157-1391, ch 3, para 15.

10 European Commission Newsroom, 'Digital Finance Package: Commission sets out new, ambitious approach to encourage responsible innovation to benefit consumers and businesses' (30 September 2020) <https://ec.europa.eu/newsroom/representations/items/688865/default> accessed 1.10.2022.

11 European Commission, Directive/Regulation establishing a European framework for markets in crypto assets, Ares(2019)7834655.

12 European Commission, 'Consultation Document on an EU framework for markets in crypto-assets' (5 December 2019) <https://ec.europa.eu/info/sites/info/files/business_economy_euro/banking_and_finance/documents/2019-crypto-assets-consultation-document_en.pdf> accessed 7 October 2022; European Commission, Commission Staff Working Document Impact Assessment', SWD(2020) 380 final; European Commission, 'Expert Group on Banking, Payments and Insurance (EGBPI) Meetings 2020' (13 March 2020) <https://ec.europa.eu/info/publications/egbpi-meetings-2020_en> accessed 10 October 2022.

13 European Commission, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on a Digital Finance Strategy for the EU, COM(2020) 591 final.

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

15 European Commission, Proposal for a Regulation of the European Parliament and of the Council on a pilot regime for market infrastructures based on distributed ledger technology, COM(2020) 594 final.

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

17 European Commission, Proposal for a Directive of the European Parliament and of the Council amending Directives 2006/43/EC, 2009/65/EC, 2009/138/EU, 2011/61/EU, EU/2013/36, 2014/65/EU, (EU) 2015/2366 and EU/2016/2341, COM(2020) 596 final.

trilogue.[18] It can therefore be assumed that the essential cornerstones of the planned regulation have already been determined, even though the final version of the Regulation has not yet been adopted at the time of writing. The final version of MiCAR is expected to be published in the Official Journal in spring 2023 and will enter into force between 12 to 18 months thereafter.[19]

MiCAR sets forth a bespoke regime for crypto-assets, which resembles other well-known areas of EU financial services law. It aims to regulate crypto-assets by imposing regulatory requirements for the public offering,[20] marketing,[21] and the provision of services related to them.[22] Additionally, MiCAR contains provisions to prevent market abuse relating to crypto-assets.[23] However, MiCAR does not treat all crypto-assets in the same way. As part of a new taxonomy, crypto-assets are divided into three sub-categories (asset-referenced tokens, e-money tokens and utility tokens),[24] which are to be distinguished and subject to different rules according to the risk they entail.

MiCAR is in line with two fundamental principles of financial regulation: technological neutrality and the concept of 'same activities, same risks, same rules'. Both principles preserve free competition in the market from interreference by policymakers and intend to maintain a level playing field for all market participants. In this respect, the principle of technology neutrality requires that regulation should be value-neutral with respect to technology.[25] Thus, policymakers should not differentiate between competing technologies, but rather market

---

18 Council of the EU, Digital finance: agreement reached on European crypto-assets regulation, Press Release 551/22.

19 ESMA, TRV Risk Analysis Crypto-assets and their risk for financial stability, ESMA50-165-2251, 14.

20 The following version of MiCAR will henceforth be named 'MiCAR Proposal', all Articles cited refer to this version, Council of the European Union, Proposal for a Regulation of the European Parliament and of the Council on Markets in Crypto-assets, and amending Directive (EU) 2019/1937, Interinstitutional File 2020/0265 (COD), 13198/22; Art. 4, Art. 15 and Art. 43 MiCAR Proposal.

21 Art. 6, Art. 25 and Art. 48 MiCAR Proposal.

22 Art. 53 – 75 (Title V) MiCAR Proposal.

23 Art. 76 – 80 (Title VI) MiCAR Proposal.

24 Art. 3(1)(2)–(5) MiCAR Proposal.

25 Bert-Jaap Koops, 'Should ICT Regulation be Technology-Neutral?' in Bert-Jaap Koops, Miriam Lips, Corien Prins and Maurice Schellekens (eds), *Starting Points for ICT Regulation: deconstructing prevalent policy one-liners* (TMC Asser Press 2006) 77 (85).

mechanisms should determine which technologies generally prevail, as this ensures the most cost-efficient solutions.[26]

The second principle, 'same activities, same risks, same rules', seeks to impose similar requirements on all market participants in a given market segment, regardless of the legal nature of those entities. In doing so policymakers can, however, not merely monitor the activity of a market participant, but must adopt an holistic approach. Depending on the extent to which an activity is provided or whether it is offered in combination with other regulated or non-regulated activities, one and the same activity may give rise to different risks.[27] It is therefore necessary to consider both the character of the activity and the risks involved in order to maintain a level playing field for all market participants.

Most activities and services provided in the crypto economy closely resemble what financial regulators are familiar with from traditional banking and finance.[28] Moreover, crypto-assets carry similar risks as traditional financial instruments when it comes to investor protection and market integrity.[29] Applying the principle of technology neutrality and the principle of 'same activities, same risks, same rules', it therefore seems appropriate to subject those crypto-assets that have comparable characteristics and risks to financial instruments to the same regulatory regime – regardless of the technology used for their issuance or transfer. However, crypto-assets are quite diverse; their characteristics and purposes range from investment-type, to utility-type, to payment-type, and many have hybrid features. Because of the wide range of crypto-assets, there is no one-size-fits-all solution when it comes to legal qualification.[30] To adequately regulate these assets, which currently fall outside existing EU financial services law, policymakers have to adopt a bespoke set of rules.

---

[26] To concept of technological neutrality was first introduced to European legislating in 1998: 'Regulation should be 'technology-neutral': as few as possible new regulations, policies and procedures should be specific to the new services', see Proposal for a Council Recommendation concerning the protection of minors and human dignity in audiovisual and information services [1998] OJ C214/25; further see Chris Reed, 'Taking Sides on Technology Neutrality' (2007) 4(3) SCRIPTed 263; Bert-Jaap Koops, 'Should ICT Regulation be Technology-Neutral?' in Bert-Jaap Koops, Miriam Lips, Corien Prins and Maurice Schellekens (eds), *Starting Points for ICT Regulation: deconstructing prevalent policy one-liners* (TMC Asser Press 2006) 77.

[27] In particular for financial stability, but also for investor and consumer protection.

[28] For the an overview of the involved actors and business models in the crypto industry see ESMA, Advice Initial Coin Offerings and Crypto-Assets, ESMA50-157-1391, ch 4, paras 17–39.

[29] ESMA, Advice Initial Coin Offerings and Crypto-Assets, ESMA50-157-1391, ch 1, para 3.

[30] ESMA, Advice Initial Coin Offerings and Crypto-Assets, ESMA50-157-1391, ch 1, para 5.

However, the existing legal framework of European financial market law was not designed with crypto-assets in mind. Therefore, there is considerable uncertainty about which assets are covered. The wording of MiCAR provides little to no support in this regard:

> *'This Regulation applies to natural and legal persons and other undertakings that are engaged in the issuance, offer to the public and admission to trading of crypto-assets or that provide services related to crypto-assets in the Union.'* [31]
>
> *'This Regulation does not apply to crypto-assets that qualify as (…) financial instruments as defined in Article 4(1), point (15) of Directive 2014/65/EU (MiFID II)'* [32].

The determination whether an asset falls within existing EU financial services rules or not is not always straightforward. To better understand the circumstances under which crypto-assets may be classified as financial instruments across the EU, ESMA conducted a survey of Member States' national competent authorities ('NCAs') in summer 2018, using a sample of real crypto-assets available to European investors (FINOM, Polybius Bank, Crypterium, PAqarium, Filecoin, and AlchemyBite).[33] The results of this survey show that the NCAs have defined the term 'financial instrument' differently in the course of transposing MiFID into national law.[34] This generates challenges for both the regulation and supervision of crypto-assets. To enable a clear delineation going forwards, the understanding of the term 'financial instrument' must be rendered more precise with regard to the (upcoming) implementation of MiCAR.

Financial instruments are those assets listed in Annex I Section C to MiFID II, *inter alia* transferable securities, money market instruments, units in collective investment undertakings and various derivative instruments.[35] Financial instruments are thus not defined by certain factual elements but by an enumerative list of product categories. In this way, the concept of financial instruments appears to be rather opaque and elusive. However, this is not a legislative mishap. The reason is to be found in the innovative capacity of the financial markets. There are

---

31 Art. 2(1) MiCAR Proposal.

32 Art. 2(3) MiCAR Proposal; Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU (recast) [2014], OJ L173/349.

33 ESMA, Advice Initial Coin Offerings and Crypto-Assets, ESMA50-157-1391.

34 ESMA, Annex 1 Legal qualification of crypto-assets – survey to NCAs, ESMA50-157-1384.

35 Art. 4(1)(15) MiFID II.

no limits to the creativity of the providers of financial market products; therefore, the law must not set itself any limits either, but must be open to developments in the market. In order to keep pace with the market, legislators must not impose rigid requirements on instruments. For this reason, it is hardly possible to give an abstract definition of a financial instrument that is conclusive once and for all.[36] This does not necessarily imply that the financial instruments remain entirely opaque and indeterminate. Financial instruments are a generic concept whose characteristic features are not fixed in all details but rather can be more or less pronounced within the framework of a moving system. These elements need to be further developed and refined in view of the upcoming MiCAR.

To clarify the delineation between crypto-assets under MiCAR and financial instruments, ESMA is required to publish guidelines on criteria and conditions for the classification of crypto-assets as financial instruments within 18 months of MiCAR entering into force.[37] However, the factual and technological realities as well as the variety of crypto-related products are evolving at a rapid pace. To enable a future-oriented delineation in this regard, ESMA will – as other guidelines indicate – not be able to avoid the use of undefined legal terms, e.g. 'balancing of interests' or 'other elements' requiring interpretation. Therefore, a legal analysis and classification is also necessary at this level.

The scope of MiCAR also poses challenges on another front: so-called non-fungible tokens (NFTs) are difficult to categorise as well. When the Commission published its first draft, it was generally assumed that MiCAR shall cover all crypto-assets which currently fall outside the existing regulatory framework on EU financial services.[38] In the course of the legislative process, market participants voiced concerns because they were not satisfied with the regulatory approach towards NFTs, which in their view are not comparable to other financial assets and therefore should not play a role within MiCAR..[39] Most classes of crypto-assets comprise a

---

[36] Lehmann, *Finanzinstrumente* (Mohr Siebeck 2009) 304.

[37] Art. 2(3) last sentence MiCAR Proposal.

[38] See *European Commission*, Proposal for a Regulation of the European Parliament and of the Council on Markets in Crypto-assets, and amending Directive (EU) 2019/1937, COM(2020) 593 final, 2: 'This proposal (…) covers crypto-assets falling outside existing EU financial services legislation (…). For crypto-asset markets to develop within the EU, there is a need for a sound legal framework, clearly defining the regulatory treatment of *all* crypto- assets that are not covered by existing financial services legislation.'

[39] Gabriel Cumenge, deputy assistant secretary at the French Ministry of Economy, criticised the current approach MiCAR is taking towards NFTs. ("We haven't seen a case where existing NFTs in the market would

multitude of individual coins or tokens with identical characteristics. They are equivalent in the sense that within one class one coin or token corresponds exactly to the other in value.[40] NFTs are different by virtue of their unique character. While they might be traded on the market and used as means of a speculative investment, they are not readily interchangeable. This feature constrains the extent to which these crypto-assets can be used in finance, and thereby limit the risks for the investors and the financial system.[41] Therefore, it has been agreed that MiCAR shall not apply to unique and non-fungible crypto-assets.[42] However, not all crypto-assets, which are commonly referred to under the term NFT, are excluded. For instance, fractions of a unique and non-fungible crypto-asset are covered by MiCAR after all; the same applies to NFTs issued in a large series or collection.[43] Once again, the terms used remain ambiguous and are open to interpretation. For example, it is questionable, whether the issuance of two crypto-assets by the same artist within a short period of time constitutes a collection, or whether there must be at least some degree of visual similarity. Overly strict interpretation of these terms could render the exception meaningless. Therefore, it remains unclear to what extent NFTs are covered by MiCAR.

Relevance

Financial instruments enjoy a prominent role within European legislation as the regulatory perimeter of most EU financial services legislation is cast around their concept.[44] If crypto-assets are thus classified as transferable securities or other types of financial instruments, their

---

fall into MiCA.") See *Jack Schickler*, New NFT Rules Possible if Lawmakers Ask, EU Official Says (2022) <www.coindesk.com/policy/2022/10/26/new-nft-rules-possible-if-lawmakers-ask-eu-official-says/> accessed 9 January 2023; some claim that EU legislators take a very narrow view of what is an NFT, see *Dmytro Spilka*, The EU's Stance on NFTs can Pave the Way for Europe to Become a Thriving Web3 Hub (2022) <www.entrepreneur.com/en-gb/money-finance/the-eus-stance-on-nfts-can-pave-the-way-for-europe-to/434524> accessed 9 January 2023. Robert Kopitsch, the secretary-general for Blockchain for Europe holds that regulators´ objective should have been to develop a bespoke regime for NFTS. The current approach which considers NFTs to be financial type instruments misses the point on the innovation these new assets could bring to Europe. See *Bjarke Smith-Meyer*, Crypto industry fears EU crackdown on NFTs (2022) <www.politico.eu/article/crypto-industry-fears-eu-crackdown-on-nfts/> accessed 9 January 2023.

40 Joshua A. T. Fairfield, 'Tokenized The Law of Non-Fungible Tokens and Unique Digital Property' (2022) 97 Indiana Law Journal 1261, (1273–1278).

41 Recital 6b MiCAR Proposal.

42 Art. 2(2a) MiCAR Proposal.

43 Recital 6c MiCAR Proposal.

44 Niamh Moloney, *EU Securities and Financial Markets Regulation* (3rd edn, OUP 2014), 50; Rüdiger Veil in Rüdiger Veil (ed), *European Capital Markets Law* (2nd edn, Hart Publishing 2017) § 8, paras 1–3.

issuers and/or firms providing investment services and/or activities in respect of these assets will be subject to the full breadth of financial legislation, including the Prospectus Regulation, the Transparency Directive, MiFID II, the Market Abuse Regulation, the Short Selling Regulation, the Central Securities Depository Regulation and the Settlement Finality Directive.[45]

At present, the classification under EU financial services law in particular is controversial – both in literature and in supervisory practice. An incorrect classification is likely to have far-reaching consequences. If crypto-assets, for example, are characterised wrongly as a transferable securities, issuers will be obliged to publish and register a prospectus pursuant to Art. 3(1) Prospectus Regulation.[46] The failure to comply with this duty opens up the full range of prospectus liability, including criminal sanctions.[47] Another prominent example are crypto exchanges, which have not been subject to any specific regulations to date. Insofar as the crypto-assets traded on them are to be characterised as financial instruments, market operators are likely to qualify as MTF[48] or OTF[49] would thus have to apply for authorisation as

---

[45] Art. 1(1) Regulation (EU) 2017/1129 of the European Parliament and of the Council of 14 June 2017 on the prospectus to be published when securities are offered to the public or admitted to trading on a regulated market, and repealing Directive 2003/71/ECText with EEA relevance [2017], OJ L168/12; Art. 1(1) Directive 2004/109/EC of the European Parliament and of the Council of 15 December 2004 on the harmonisation of transparency requirements in relation to information about issuers whose securities are admitted to trading on a regulated market and amending Directive 2001/34/EC [2004], OJ L390/38; Art. 1(1), Art. 4(1)(2) MiFID II; Art. 2 Regulation (EU) No 596/2014 of the European Parliament and of the Council of 16 April 2014 on market abuse (market abuse regulation) and repealing Directive 2003/6/EC of the European Parliament and of the Council and Commission Directives 2003/124/EC, 2003/125/EC and 2004/72/EC Text with EEA relevance [2014], OJ L173,1; Art. 1(1) Regulation (EU) No 236/2012 of the European Parliament and of the Council of 14 March 2012 on short selling and certain aspects of credit default swaps Text with EEA relevance [2012], OJ L86/1; Art. 1(2) Regulation (EU) No 909/2014 of the European Parliament and of the Council of 23 July 2014 on improving securities settlement in the European Union and on central securities depositories and amending Directives 98/26/EC and 2014/65/EU and Regulation (EU) No 236/2012 Text with EEA relevance [2014], OJ L257/1; Art. 1 lit. c, Art. 2 lit. h Directive 98/26/EC of the European Parliament and of the Council of 19 May 1998 on settlement finality in payment and securities settlement systems [1998], OJ L166/45.

[46] Unless an exception applies, see Art. 1(4–5) Prospectus Regulation.

[47] Art. 38 Prospectus Regulation; for an overview of the available sanctions across jurisdictions, see ESMA, Report Comparison of liability regimes in Member States in relation to the Prospectus Directive, ESMA/2013/619; further see Danny Busch, Guido Ferrarini and Jan Paul Franx (eds), *Prospectus Regulation and Prospectus Liability (*OUP 2020).

[48] Matthias Lehmann, 'Internationales Finanzmarktrecht' in Jan v. Hein (ed), *Münchener Kommentar zum Bürgerlichen Gesetzbuch* (vol. 13, 9th edn, C.H.Beck forthcoming 2023); Matthias Siedler in Florian Möslein and Sebastian Omlor (eds), *FinTech-Handbuch* (2nd edn, C.H.Beck 2021) § 7 para 158; Michael Denga in Florian Möslein and Sebastian Omlor (eds), *FinTech-Handbuch* (2nd edn, C.H.Beck 2021) § 13 paras 37–38.

[49] Commission Staff Working Document, Impact Assessment Accompanying the document Proposal for a Regulation of the European Parliament and of the Council on a pilot regime for market infrastructures based on distributed ledger technology, SWD(2020) 201 final, para 86.

investment firms; subsequently, they would also be subject to the other prudential requirements under MiFID II.[50] Failure to comply with these requirements will also trigger rigorous sanctions.[51]

The current unclear legal characterisation of crypto-assets is a major challenge for many businesses within the crypto economy; it slows down innovation and prevents the development of a sustainable ecosystem.[52] To exploit the full potential of this new technology, a clear and reliable legal framework is needed within which the players can operate – without exposing themselves to massive liability risks. In addition, the crypto economy as a whole is likely to benefit from legal certainty and may attract new business partners and customers. This doctoral thesis therefore attempts to contribute to a uniform and legally secure interpretation.

Overview of the current state of research

The regulation of crypto assets has already been subject to significant debate within supervisory authorities as well as legal scholarship. One of the most important pieces of legal analysis in this field is the survey by ESMA regarding the applicability of European Union law to crypto-assets.[53] This survey has not yet been comprehensively reviewed by legal literature. There are, however, other authors that have partially addressed the issue at hand. Philipp *Hacker and Chris Thomale* have analysed the applicability of the Prospectus Regulation in the realm of Initial Coin/Token Offerings ('ICOs or ITOs'), focussing on whether crypto-assets may fall within the category of transferable securities. Transferable securities are, however, just a sub-category of financial instruments pursuant to Art. 4(1)(15) MiFID II. Other works, mainly written by legal practitioners and supervisory authorities, have provided a brief, yet practical

---

50 Matthias Lehmann, 'Internationales Finanzmarktrecht' in Jan v. Hein (ed), *Münchener Kommentar zum Bürgerlichen Gesetzbuch* (vol. 13, 9th edn, C.H.Beck forthcoming 2023); Commission Staff Working Document Impact Assessment Accompanying the document Proposal for a Regulation of the European Parliament and of the Council on Markets in Crypto-assets and amending Directive (EU) 2019/1937, para 1.2.1.

51 Art. 70 MiFID II.

52 See ESMA, Advice Initial Coin Offerings and Crypto-Assets, ESMA50-157-1391, ch 6, para 75.

53 ESMA, Advice Initial Coin Offerings and Crypto-Assets, ESMA50-157-1391; ESMA, Annex 1 Legal qualification of crypto-assets – survey to NCAs, ESMA50-157-1384.

very useful, overview of crypto-asset classification.[54] Ultimately, it is up to the CJEU to ensure a uniform interpretation of these provisions. So far, however, there is no supreme court case law – neither at the European nor, as far as can be ascertained, at the national level. Consequently, there is no consensus – neither in literature nor in supervisory practice – on this important issue and thus, it will be a central question in my thesis.

With regards to monographs in the field, there are already three significant German-language works on the classification of crypto-assets. There are two Austrian monographs (*Christian Steiner*, Head of Regulatory at Bitpanda GmbH,[55] and *Ralph Rirsch,* Austrian Financial Supervisory Authority, Department of Securities),[56] which – among other things – discuss the categorisation of crypto-assets from a regulatory perspective. In addition, there are a variety of handbooks that analyse the possible categorisation of crypto-assets within their own supervisory law. For example, *Andreas Schwennicke* deals with the classification of crypto-assets under German law,[57] *Lorenz Marek* does the same for Austrian law.[58] Also worth mentioning is the extensive commentary literature on MiFID and MiFID II and its national implementations, such as *Danny Busch and Guido Ferrarini*, Regulation of the EU Financial Markets (2016);[59] *Matthias Lehmann and Christoph Kumpan*, European Financial Services Law (2019);[60] *Ernst Brandl and Gerhard Saria*, Wertpapieraufsichtsgesetz 2018;[61] *Heinz-Dieter Assmann, Uwe Schneider and Peter Mülbert*, Wertpapierhandelsrecht (2019);[62] *Eberhard Schwark and Daniel Zimmer*, Kapitalmarktrechts-Kommentar (2020)[63] and *Heribert Hirte and Thomas Möllers*, Kölner Kommentar zum WpHG (2014).[64] Finally, there is the habilitation of

---

54 Christian Piska and Oliver Völkl, *Blockchain Rules* (MANZ Verlag 2019); Axel Anderl (ed), *#Blockchain in der Rechtspraxis* (LexisNexis ARD ORAC 2020), Martin Hanzl, *Handbuch Blockchain und Smart Contracts* (Linde Verlag 2020).

55 Christian Steiner, *Krypto-Assets und das Aufsichtsrecht* (finanzverlag 2019).

56 Ralph Rirsch, *Crypto-Assets: DLT-Token als Objekt der Finanzmarktaufsicht – Taxonomie, Kritik und Lösungsansätze* (facultas 2022).

57 Andreas Schwennicke in Sebastian Omlor and Mathias Link (eds), *Handbuch Kryptowährungen und Token* (R&W 2021) 355-404.

58 Lorenz Marek in Christian Piska and Oliver Völkel (eds), *Blockchain rules* (Manz Verlag 2019), 205-226.

59 Danny Busch and Guido Ferrarini, *Regulation of the EU Financial Markets* (OUP 2016).

60 Matthias Lehmann and Christoph Kumpan, *European Financial Services Law* (Nomos Beck Hart, 2019).

61 Ernst Brandl and Gerhard Saria (eds), *Wertpapieraufsichtsgesetz 2018* (43th supp, 2nd edn, Manz Verlag).

62 Heinz-Dieter Assmann, Uwe Schneider and Peter Mülbert (eds), *Wertpapierhandelsrecht* (7th edn, ottoschmidt 2019).

63 Eberhard Schwark and Daniel Zimmer (eds), *Kapitalmarktrechts-Kommentar* (5th edn, C.H.Beck 2020).

64 Heribert Hirte and Thomas Möllers (eds), *Kölner Kommentar zum WpHG* (Heymanns 2014).

Matthias Lehmann (2009)[65], which is *inter alia* focussed on financial instruments under German financial markets law and property law. These influential works sharpen the understanding of the term 'financial instrument' in general.

Although there are already some monographs on the classification of crypto-assets, there is a lack of English-language works on the matter, and those that exist in other languages date from a time when the EU had not yet proposed a harmonised framework for crypto-assets. In addition to the discourse already initiated by the aforementioned works, my dissertation will bring a different perspective to these questions by using theoretical concepts to classify a number of selected crypto-assets. As a basis, I will use all crypto-assets currently listed by Binance.[66] Moreover, it will be crucial to add an English-language monograph to enable worldwide access to findings in this field, which is to be harmonised on a European level. Finally, unlike previous monographs, my thesis will combine legal doctrine with empirical analysis to provide a deeper analysis of the regulatory coverage of crypto-assets.

Research Questions

In my dissertation project, I would like to proceed as follows: First, I will give a brief introduction whether blockchain technology requires regulation. Then, I will provide an overview of the survey conducted by ESMA on the applicability of EU financial services law to crypto-assets and describe the economic importance to distinguish between financial instruments and crypto assets covered by MiCAR from the perspective of the issuer or service provider. The core of my thesis will be the critical analysis of the concept of financial instruments as a delineation to crypto-assets – taking into account the guidelines provided by ESMA, followed by the illustration of the taxonomy imposed by MiCAR. This chapter will be followed by the empirical analysis of a number of selected crypto-assets, which fall either under within MiFID II (financial instrument) or the upcoming MiCAR (crypto-assets, asset-reference token, e-money token, utility token) or continue to be unregulated.

---

[65] Matthias Lehmann, *Finanzinstrumente* (Mohr Siebeck 2009).

[66] For the current list of supported crypto-assets see Binance, <www.binance.com/en/markets> accessed 9. January 2023.

The aim of the thesis is to provide a comprehensive and practically useful categorisation of crypto-assets within the European framework. In particular, I aim to answer the following questions:

1. Which parts of EU financial services law may be applicable to crypto-assets and how does MiCAR interact with other legislative acts by the EU?
2. What are the results of the advice on Initial Coin Offerings ('ICOs') and crypto-assets provided by ESMA?
3. How to delineate crypto-assets from financial instruments?
4. What is the normative concept of a financial instrument?
5. How to delineate between the three sub-categories of crypto-assets within MiCAR?
6. How is the delineation between non-fungible tokens and crypto-assets within MiCAR drawn?
7. Considering that the factual and technological realities are evolving at a rapid pace, do the definitions set out by MiCAR provide for a future-oriented taxonomy of crypto-assets?
8. Given the dogmatic findings regarding the concept of financial instruments, how should a wide range of currently used and marketed crypto-assets within the new taxonomy be classified?

Method and procedure

The main sources of my doctoral thesis will be the legal norms governing financial instruments and crypto-assets, as well as materials that shed light on their interpretation. Methodologically, I will draw on the doctrine of categorisation (*Typenlehre*) developed by Karl Larenz[67] in order to fathom the normative concept of a financial instruments. In addition, I will empirically analyse and categorise the particularities of all coins and tokens currently listed on Binance (350+) based on their publicly available whitepapers. This collection of data will be included in the appendix of the dissertation in a well-organised manner.

[67] *Larenz/Canaris*, Methodenlehre der Rechtswissenschaft (3th edn, Springer-Verlag 1995) 290–302.

Preliminary working schedule

Winter term 2022/2023

- SE Seminar für Doktorand*innen („Blockchain Rules“), with presentation of the dissertational topic and submission of the exposé
- Further intensive research in the dissertational field
- Start of the writing phase of the thesis
- Gathering data/whitepapers

Summer term 2023, Winter term 2023/2024, Summer term 2024

- Writing of the thesis
- Start of structuring the data
- Further intensive research in the dissertational field
- VO Angewandte Methoden der Rechtswissenschaften für ARS Iuris Fellows
- Seminars in the field of the dissertation

Winter term 2024/2025

- Writing of the thesis
- Finalising data
- Further intensive research in the dissertational field
- Seminars in the field of the dissertation

Summer term 2025

- Finalising of the thesis
- Potential other seminars or lectures in the dissertation field

Winter term 2025/2026

- Submission of the thesis and defensio

Draft Outline

I. Introduction
   A. Coins and Tokens as New Financial Assets
   B. Blockchain and the Law – Do Crypto-Assets need Regulation?
      1. Legal Uncertainty
      2. Consumer and Investor Protection
      3. Financial Stability
      4. Innovation
II. Crypto-Assets vs. Non-Crypto-Assets in EU Financial Law: A Delineation
   A. The Principle of Technological Neutrality
   B. Same Activity, Same Risks, Same Rules
   C. A Split Market?
   D. Regulatory Implications when a Crypto-Asset qualifies as a Financial Instrument
III. EU Financial Services Law and its Applicability to the Crypto-Economy
   A. Financial Instrument: An Unclear Notion?
   B. The Normative Concept of Financial Instruments
   C. Transferable Securities
      1. Transferability
      2. Negotiability
      3. Standardisation
   D. Money Market Instruments
   E. Units in Collective Investment Undertakings
   F. Derivative Instruments
IV. Markets in Crypto-Assets Regulation (MiCAR)
   A. Crypto-assets as a Catch-all Category
   B. Utility Token
   C. E-Money Token
   D. Asset-referenced Token
   E. Crypto-Assets Outside MiCAR
V. Classification of Crypto-Assets

Preliminary bibliography

Primary literature

- *Council of the European Union*, Proposal for a Regulation of the European Parliament and of the Council on Markets in Crypto-assets, and amending Directive (EU) 2019/1937, Interinstitutional File 2020/0265 (COD), 13198/22.
- Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU (recast).
- *European Commission*, Proposal for a Regulation of the European Parliament and of the Council on Markets in Crypto-assets, and amending Directive (EU) 2019/1937, COM(2020) 593 final.

- *Basel Committee on Banking Supervision*, 'Discussion Paper Designing a prudential treatment for crypto assets' (December 2019) <https://www.bis.org/bcbs/publ/d490.htm> accessed 10 October 2022.
- *EBA*, 'Report with advice for the European Commission on crypto-assets' (9 January 2019) <www.eba.europa.eu/sites/default/documents/files/documents/10180/2545547/67493daa-85a8-4429-aa91-e9a5ed880684/EBA%20Report%20on%20crypto%20assets.pdf?retry=1> accessed 10 October 2022.
- *ECB*, ESCB/European banking supervision response to the European Commission's public consultation on a new digital finance strategy for Europe/FinTech action plan; <www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.esbceuropeanbankingsupervisionresponsetoeuropeancommissionpublicconsultationdigitalfinancestrategyeuropefintechactionplan2020~b2e6cd0dc4.en.pdf> accessed 10 October 2022.
- *European Commission*, 'Consultation Document On an EU framework for markets in crypto-assets' (2019) <https://ec.europa.eu/info/sites/info/files/business_economy_euro/banking_and_finance/documents/2019-crypto-assets-consultation-document_en.pdf> accessed 10 October 2022.
- *European Commission*, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on a Digital Finance Strategy for the EU, COM(2020)591 final.
- *European Commission*, 'Expert Group on Banking, Payments and Insurance (EGBPI) Meetings 2020' (13 March 2020) <https://ec.europa.eu/info/publications/egbpi-meetings-2020_en> accessed 10 October 2022.
- *ESMA*, Advice Initial Coin Offerings and Crypto-Assets, ESMA50-157-1391.
- *ESMA*, Annex 1 Legal qualification of crypto-assets – survey to NCAs, ESMA50-157-1384.
- *European Commission,* Commission Staff Working Document Impact Assessment' SWD(2020) 380 final.
- *FATF*, 'Guidance for a Risk-Based Approach to Virtual Assets and Virtual Asset Service Providers' (2019) <www.fatf-*gafi.org/publications/fatfrecommendations/documents/guidance-rba-virtual-assets.html> accessed 10 October 2022.*

- *FATF*, 'Updated Guidance for a Risk-Based Approach to Virtual Assets and Virtual Asset Service Providers' (2021) <www.fatf-gafi.org/media/fatf/documents/recommendations/Updated-Guidance-VA-VASP.pdf> accessed 6 October 2022.
- *FSB*, 'Crypto-assets Work underway, regulatory approaches and potential gaps' (31 May 2019) <www.fsb.org/2019/05/crypto-assets-work-underway-regulatory-approaches-and-potential-gaps/> accessed 10 October 2022.
- *FSB*, 'Crypto-assets regulatory directory' (5 April 2019) <www.fsb.org/wp-content/uploads/P050419.pdf accessed 10 October 2022.
- *FSB*, 'Crypto-asset markets: Potential channels for future financial stability implications' (October 2018) <www.fsb.org/2018/10/crypto-asset-markets-potential-channels-for-future-financial-stability-implications/> accessed 10 October 2022.
- *FSB*, 'Crypto-assets Report to the G20 on work by the FSB and standard-setting bodies' (6 July 2018) <www.fsb.org/2018/07/crypto-assets-report-to-the-g20-on-the-work-of-the-fsb-and-standard-setting-bodies/> accessed 10 October 2022.
- *FSB*, 'Decentralised financial technologies Report on financial stability, regulatory and governance implications' (6 June 2019) <www.fsb.org/2019/06/decentralised-financial-technologies-report-on-financial-stability-regulatory-and-governance-implications/> accessed 10 October 2022.
- *G7 Working Group on Stablecoins*, 'Investigating the impact of global stablecoins' (October 2019) 3 <www.bis.org/cpmi/publ/d187.pdf> accessed 6 October 2022.

Secondary literature

- Antonopoulos A., *Mastering Bitcoin: Unlocking Digital Cryptocurrencies* (2nd edn, O'Reilly 2017).
- Assmann H. and Schneider U., *Wertpapierhandelsrecht* (8nd edn, Otto Schmidt 2019).
- Anderl A. (ed), *#Blockchain in der Rechtspraxis* (LexisNexis ARD ORAC 2020).
- Bonneau J., Miller A., Clark J, Narayanan A., Kroll J. A. and Felten E. W., 'Research Perspectives and Challenges for Bitcoin and Cryptocurrencies' IEEE Symposium on Security and Privacy (2015), 104.
- Brandl E. and Saria G., *Wertpapieraufsichtsgesetz* (43th supp, 2nd end, MANZ Verlag 2018).
- Busch D. and Ferrarini G., *Regulation of the EU Financial Markets* (OUP 2016).
- Busch D., Ferrarini G. and Franx J.P., *Prospectus Regulation and Prospectus Liability* (OUP, 2020).
- Dobrowolski M., 'Überblick über die unterschiedlichen aufsichtsrechtlichen Rahmenbedingungen für Initial Coin Offerings' (2018) 3 GesRZ, 147.
- Enriques L. and Gilotta S., 'Disclosure and Financial Markets Regulation' in: Niamh Moloney, Eilis Ferran, and Jennifer Payne (eds), *The Oxford Handbook of Financial Regulation* (OUP, 2015).
- Fairfield J. A. T., 'Tokenized The Law of Non-Fungible Tokens and Unique Digital Property' (2022) 97 Indiana Law Journal 1261, (1273–1278).
- Filippi P. and Wright A., *Blockchain and the Law The Rule of Code* (Harvard University Press 2018).

- Grundmann S. and Hacker P., 'Digital Technology as a Challenge to European Contract Law' (2017) 13 European Review of Contract Law 255.
- Hacker P. and Thomale C., 'Crypto-Securities Regulation: ICOs,Token Sales and Cryptocurrencies under EU Financial Law' (2018) 15(4) ECFR 645
- Hanzl M., *Handbuch Blockchain und Smart Contracts* (Linde Verlag 2020).
- Kalss S., Oppitz M. and Zollner J., *Kapitalmarktrecht* (2nd edn, Linde Verlag, 2015).
- Koops B-J., 'Should ICT Regulation be Technology-Neutral?' in Bert-Jaap Koops, Miriam Lips, Corien Prins and Maurice Schellekens (eds), Starting Points for ICT Regulation: deconstructing prevalent policy one-liners (TMC Asser Press 2006) 77.
- Lehmann M., *Finanzinstrumente* (Mohr Siebeck 2009).
- Lehmann M. and Kumpan C. (eds), *European Financial Services Law* (Beck Hart Nomos 2019).
- Moloney N., *EU Securities and Financial Markets Regulation* (3rd edn, OUP 2014).
- Narayanan A., Bonneau J., Felten E., Miller A. and Goldfeder S., *Bitcoin and Cryptocurrency Technologies. A Comprehensive Introduction* (Princeton University Press, 2016).
- Omlor S. and Link M. (eds), *Handbuch Kryptowährungen und Token* (R&W 2021).
- Pardolesi R. and Davola A., 'What Is Wrong in the Debate About Smart Contracts' (2020) 9(5) Journal of European Consumer and Market Law, 201.
- Piska C. and Völkl O., *Blockchain Rules* (MANZ Verlag 2019).
- Rahmatian A., 'Electronic Money and Cryptocurrencies (Bitcoin): Suggestions for Definitions, (2019) 34(3)Journal of International Banking Law and Regulation 115.
- Reed C., 'Taking Sides on Technology Neutrality' (2007) 4(3) SCRIPTed 263.
- Rirsch R., Crypto-Assets: *DLT-Token als Objekt der Finanzmarktaufsicht – Taxonomie, Kritik und Lösungsansätze* (facultas 2022).
- Rohr J. and Wright A., 'Blockchain-Based Token Sales, Initial Coin Offerings, and the Democratization of Public Capital Markets' (2018) University of Tennessee Legal Studies Research Paper No. 338.
- Schwark E. and Zimmer D., *Kapitalmarktrechtskommentar* (5th edn, C.H.Beck 2020).
- Steiner C., *Krypto-Assets und das Aufsichtsrecht* (finanzverlag 2019).
- Veil R. (ed), *European Capital Markets Law* (2nd edn, Hart Publishing 2017).
- Werbach K., 'Trust, But Verify: Why the Blockchain needs the Law' (2018) 33 Berkeley Technology Law Journal 487.
- Wright A. and Filippi P., 'Decentralized Blockchain Technology and the Rise of Lex Cryptographia' (2015) <https://ssrn.com/abstract=2580664> accessed 10 October 2022.
- Zetzsche D. A., Buckley R. P. and Arner D. W., 'Regulating LIBRA: The Transformative Potential of Facebook's Cryptocurrency and Possible Regulatory Responses' (2021) 41(1) Oxford Journal of Legal Studies 80.
- Zickgraf P., 'Initial Coin Offerings – Ein Fall für das Kapitalmarktrecht? (2018) 9 Die Aktiengesellschaft, 293.
- Zivny T. and Mock S., *EU-ProspektVO/KMG 2019* (3rd edn, MANZ Verlag 2021).