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Regulation of Initial Coin Offerings: Reconciling U.S. and E.U. Securities Laws

Philipp Maume* and Mathias Fromberger**

Abstract

In 2016, when Initial Coin Offerings (ICOs) were first introduced, financial markets, scholars, and entrepreneurs were captivated by the opportunities and challenges the technology offered. ICOs quickly became one of the hottest topics in the financial markets. They typically use blockchain technology to offer so-called “tokens” that can confer various rights to their holders. The amount of money raised via ICOs has reached \$27 billion by the end of 2018. Commentators have described the ICO bonanza as a new gold rush. Nevertheless, the legal framework for ICOs remains unclear because traditional securities regulation is designed for classical securities that are traded on a stock exchange. In late 2017, the U.S. Securities and Exchange Commission (SEC) released two statements suggesting that tokens may be subject to U.S. securities regulation if they meet the requirements for an “investment contract” as laid out in the Howey test. However, regulators in Asia and Europe remain quite vague on the issue.

In this Article we analyze the legal framework for ICOs in the E.U. It is our view that investment tokens (including hybrid tokens with some investment functions) are “transferable securities” under Directive 2014/65/EU on Markets in Financial Instruments. Although this definition appears to be quite different from the “investment contract” definition under U.S. law, the financial markets law of the E.U., if applied correctly, comes to results that are comparable to the outcomes of the investigations carried out by the U.S. SEC. The result would be a similar framework in two of the most vibrant regions for ICOs. It would be a first step towards a harmonized application of securities laws to ICOs, avoiding regulatory patchwork and a possible “race to the bottom.”

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I. INTRODUCTION

Seventy-three terawatt hours (53.2 TWh). This is the predicted annual energy consumption of mining Bitcoins based on a projection made on December 4, 2018.¹ It is the equivalent of the annual energy consumption of Bangladesh, a developing country with 162.9 million citizens.² It is 0.24 per cent of the world's annual energy consumption.³ It is arguably the first time in history that a payment system might be regulated due to its negative impact on the environment. The environmental implications are not the sole contributors to the cryptocurrency hype: If you had invested a mere one hundred dollars in the, then new, cryptocurrency Ethereum in 2015, and sold everything in January 2018 when the market price reached an all-time high, your investment portfolio would be valued at \$462,000.⁴ Similar returns on investment were generated by other cryptocurrencies,⁵ such as NEO and Spectrecoin.⁶ It is fair to say that the world is currently captivated by Bitcoin and other cryptocurrencies. Given these staggering numbers, it is not surprising that Bitcoin and Ethereum are often referred to in the general media and even American comedy shows.⁷ These cryptocurrencies raise significant and tricky legal questions, such as: Do they require specific regulation? Are they “real” currencies? How can fraud be reduced? What is the tax treatment of cryptocurrencies?

Not only is the sheer size of the cryptocurrency phenomenon noteworthy, but the market has also developed with remarkable speed. In 2009, Bitcoin was created as the first cryptocurrency.⁸ Although technically significant, cryptocurrencies remained a niche of the financial system for years. It was not until 2016 that the markets realized the enormous potential of the blockchain

¹ See *Bitcoin Energy Consumption Index*, DIGICONOMIST, <http://perma.cc/3RPE-DUMQ>.

² See *id.*

³ See *id.*

⁴ The price of Ethereum was 31 cents, and the all-time high was \$1432.88 on January 13, 2018. At the time of submitting this paper, the Ethereum price was about \$86; *Ethereum (ETH)*, COINMARKETCAP, <http://perma.cc/YJ8W-EPB5>.

⁵ As of December 2018, more than 2060 cryptocurrencies have been created; see *All Cryptocurrencies*, COINMARKETCAP, <http://perma.cc/YFX9-39HB>.

⁶ See Jonnie Emsley, *10 Most Successful ICOs of All Time*, INVEST IN BLOCKCHAIN (Mar. 12, 2018), <http://perma.cc/D24V-D4H7>.

⁷ See, for example, *Cryptocurrencies: Last Week Tonight with John Oliver* (HBO television broadcast Mar. 11, 2018).

⁸ See Alex Hern, *Bitcoin and Cryptocurrencies – What Digital Money Really Means for Our Future*, THE GUARDIAN (Jan. 29, 2017), <http://perma.cc/GB5Q-XK9Y>.

technology⁹ upon which cryptocurrencies are based. Staff members of the German financial markets regulator Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) described the crypto-token bonanza as a “wave” that started washing over them in 2017.¹⁰ In 2016, a modest \$98.7 million was raised by initial coin offerings (ICOs) worldwide.¹¹ This increased to \$6.6 billion in 2017¹² and then \$20.3 billion in December 2018.¹³ As of publication, more than \$27 billion has been raised in about two years. ICOs such as Filecoin and Tezos each managed to collect more than \$200 million from investors.¹⁴ The Russian messaging service Telegram raised a whopping \$1.7 billion in two token presales.¹⁵ The internet startup Block.one even raised \$4 billion without having a live product.¹⁶

Currently, the cryptocurrency market seems to be reorganizing itself. Of the 902 ICOs in 2017, forty-six percent had already failed during the first half of 2018.¹⁷ This suggests a high level of incompetence among the issuers and/or a high level of fraud in the market. Commentators estimate that about ten percent of ICOs have involved scams, phishing, Ponzi schemes, and other forms of fraudulent behavior.¹⁸ These numbers also emphasize the need for investor protection provided by financial markets regulation.¹⁹ Market insiders have stated that a growing number of incumbent listed companies are planning to

⁹ “Blockchain” describes a decentralized database that is stored on numerous computers of a network. It can be utilized for various purposes, such as cryptocurrencies, smart contracts, and public registers. The concept will be discussed in more detail in Section II of this Article.

¹⁰ Thomas Trossen, Federal Financial Supervisory Authority (BaFin), Conference Panel Discussion at BaFin Tech 2018 (Apr. 4, 2018).

¹¹ See *Cryptocurrency ICO Stats 2016*, COINSCHEDULE, <http://perma.cc/8RF8-57YP>.

¹² See *Cryptocurrency ICO Stats 2017*, COINSCHEDULE, <http://perma.cc/C6NL-7Z4X>.

¹³ See *Cryptocurrency ICO Stats 2018*, COINSCHEDULE, <http://perma.cc/YZN9-Q6B9>.

¹⁴ See *Coinist 50 Biggest ICOs*, COINIST, <http://perma.cc/3BN7-RNQ2>.

¹⁵ See Paul Vigna, *Telegram Messaging App Scraps Plans for Public Coin Offering*, THE WALL STREET JOURNAL (May 2, 2018), <http://perma.cc/AK39-HSCT>. The term “presale” describes a token sale event that issuers initiate before the official ICO campaign commences. Effectively, token presales are part of the ICO.

¹⁶ See Kate Rooney, *A Blockchain Start-Up Just Raised \$4 Billion Without a Live Product*, CNBC (May 31, 2018), <http://perma.cc/2WG2-92FG>.

¹⁷ See Thomas Delahunty, *About Half of 2017’s ICOs Have Failed Already*, NEWS BTC (Feb. 26, 2018), <http://perma.cc/6QE2-KZX6>.

¹⁸ See Usman Chohan, *Initial Coin Offerings (ICOs): Risk, Regulation, and Accountability*, U. NEW SOUTH WALES DISCUSSION PAPER SERIES: NOTES ON THE 21ST CENTURY 2 (Nov. 30, 2017), <http://perma.cc/6VC5-HR7B>.

¹⁹ In this Article, the terms “financial markets regulation” and “securities regulation” are used interchangeably.

raise funds using blockchain technology.²⁰ These observations suggest that the first “ICO gold rush” has slowed down and that the token market is undergoing a process of maturation.²¹ However, it is a reasonable assumption that the market volume will keep growing, with no end in sight. Some commentators even argue that token sales could reshape the structure of capital markets in general, similar to the changes to media distribution and retail structures triggered by the internet.²²

Oddly, these developments hang in legal limbo. Starting with the U.S. Securities Act of 1933, nearly all countries have established rules to regulate their capital markets.²³ The common objectives are to ensure market fairness and integrity, to protect investors, and to facilitate systemic stability.²⁴ It is evident that a company issuing crypto tokens online to the public in return for funds strongly resembles an initial public offering (IPO), in which a company offers securities to the public at a stock exchange. The latter would be strictly regulated by securities laws.²⁵ It is also evident that token sales raise issues of investor protection and that a possible “token bubble” could be a threat to systemic stability.²⁶ Unsurprisingly, the current Bitcoin hype has been described as the “biggest bubble in history.”²⁷ So the obvious question that will be addressed in this Article is: How do ICOs fit into the existing framework of securities regulation?

This question is difficult to answer. Although numerous financial markets regulators have issued guidance regarding ICOs, there is still significant uncertainty in the markets as to which ICOs are subject to financial markets

²⁰ See, for example, Michael F. Spitz, Managing Director, Main Incubator GmbH, Conference Panel Discussion at BaFin Tech 2018 (Apr. 4, 2018).

²¹ See Charlie Burton, *The ICO Bubble is About to Burst... But That's a Good Thing*, WIRED (Dec. 15, 2017), <http://perma.cc/G98D-N4DM>.

²² See Jonathan Rohr & Aaron Wright, *Blockchain-Based Token Sales, Initial Coin Offerings, and the Democratization of Public Capital Markets* 6 (U. Tenn. Legal Stud. Res. Paper No. 338, Cardozo Legal Stud. Res. Paper No. 527, 2018).

²³ The International Organization of Securities Commissions (OICV-IOSCO, the international association of national regulatory agencies for securities markets) comprises members from 115 jurisdictions, covering 95% of the world's securities markets; OICV-IOSCO, FACT SHEET at 2 (Feb. 2018), <http://perma.cc/6T4Z-EJJM>.

²⁴ See OICV-IOSCO, OBJECTIVES AND PRINCIPLES OF SECURITIES REGULATION at 3 (June 2010), <http://perma.cc/SRM6-B6WS>.

²⁵ Securities Act of 1933 § 5, 15 U.S.C. § 77(e) (2012).

²⁶ Compare Ryan Surujnath, *Off the Chain! A Guide to Blockchain Derivatives Markets and the Implications on Systemic Risk*, 22 FORDHAM J. CORP. & FIN. L. 257, 291–304 (2017) for a discussion on the systemic risks inherent in blockchain technology.

²⁷ Janine Wolf, *Bitcoin, the Biggest Bubble in History, Is Popping*, BLOOMBERG (Apr. 9, 2018), <http://perma.cc/Q4W4-YPJU>.

regulation. Similar to gold rushes, ICOs attract speculators and dubious market participants. It is not surprising that several regulators have issued investor warnings. Even American political commentator and comedian John Oliver cautioned his viewers against the dangers of investing in crypto tokens, stating, “You are not investing, you are gambling.”²⁸ The People’s Republic of China²⁹ and the Republic of Korea³⁰ went further, banning all ICOs. This demonstrates the uncertainty among policymakers and regulators. However, it is doubtful whether such an approach is sensible because it is undisputed that ICOs present great opportunities for issuers, such as lower costs of raising capital and a global audience for the token sale. In the case of China, an outright ban has not been effective because market participants use workarounds and loopholes.³¹ The result has been “comparable to that of a parent telling their rowdy children to quiet down. The volume may have been turned down a notch or two, but the activity is still happening.”³²

The legal problem is that financial markets regulation is technology-neutral. This means that the same set of statutory rules apply to financial services and transactions, regardless of the type of technology used.³³ Nevertheless, these regulations “must also be applied in a proportionate manner, reflecting the business model, size, systemic significance, as well as the complexity and cross-border activity of the regulated entities.”³⁴ In other words, although the existing regulatory framework needs to be applied, it must take into account the particularities of the respective service. The legal status quo creates a high level of uncertainty among market participants, as some of the established approaches might not work appropriately in the financial technology (“fintech”) context.

²⁸ See Oliver, *supra* note 7.

²⁹ THE PEOPLE’S BANK OF CHINA, Public Notice of the PBC, CAC, MIIT, SAIC, CBRC, CSRC and CIRC on Preventing Risks of Fundraising through Coin Offering, (Sept. 8, 2017), <http://perma.cc/9AUV-FSBW>; see Lee A. Sheppard, News Analysis: Is Bitcoin Going Out of Style?, TAX NOTES INT’L MAG. (Sept. 11, 2017), at 1028–29.

³⁰ See Edward White & Bryan Harris, *South Korea Bans Initial Coin Offerings*, FINANCIAL TIMES (Sept. 28, 2017), <http://www.ft.com/content/eb981cd8-9923-37c3-9ec3-e5276b65ee8e>.

³¹ See Gerelyn Terzo, *What Ban? Chinese Investors Continue to Participate in ICOs with Workarounds*, CCN (Mar. 21, 2018), <http://perma.cc/BT3Y-CFF2>.

³² *Id.*

³³ See, for example, Eur. Comm’n, Directorate General Financial Stability, *FinTech: A More Competitive and Innovative European Financial Sector* 4, 5, 15 (Consultation Document), <http://perma.cc/2JRF-HDBM> (regarding financial technology regulation in general). According to OICV-IOSCO, most regulators follow the neutrality approach. OICV-IOSCO, UPDATE TO THE REPORT ON THE IOSCO AUTOMATED ADVICE TOOLS SURVEY – FINAL REPORT 4 (File No. FR15/2016, Dec. 2016), <http://perma.cc/KS6V-DKUT> (regarding the regulation of automated advice tools, specifically).

³⁴ Eur. Comm’n, *supra* note 33, at 15.

In the ICO context, the established frameworks for securities regulation and IPOs are the starting points. It then needs to be asked whether these established procedures and views take into account the specifics of the new technology, or whether they need to be reinterpreted to better fit the purpose of the statutory requirements. This can be illustrated by the way ICO tokens are marketed, which cannot be compared to a traditional IPO. The latter is traditionally linked to a stock exchange where the securities are offered and sold. Online marketing and the publication of prospectuses on websites complement the stock exchange as the traditional sales channel for IPOs.³⁵ In contrast, online marketing is the primary, and often the only, communication and distribution channel of an ICO. This reversal can have several implications, including the targeting of investors³⁶ and pre-contractual contact between issuers and investors.³⁷

The relevance of the issue cannot be overestimated. The markets are growing quickly and will continue to do so. The most prominent (although not exclusive) risk for issuers is prospectus liability, which means that investors could demand the return of their investments if registration was not made and an investment prospectus was not published. In the U.S., the relevant obligation is prescribed in § 5 of the Securities Act of 1933.³⁸ The corresponding rule under E.U. law is Article 3 of Regulation 2017/1129.³⁹ Depending on the respective jurisdiction, issuers could also face fines or even criminal charges.⁴⁰ To our knowledge, not a single ICO issuer has published an approved prospectus.⁴¹ The result is legal limbo with huge liability risks for issuers. It is not surprising that academics⁴² and interest groups⁴³ have started to evaluate the possible shape of

³⁵ See, for example, *Where Does Marketing Sit in the IPO Process? Front and Centre!*, IMAGINIS (Feb. 22, 2016), <http://perma.cc/EBV7-ET2P>.

³⁶ This could be relevant for the question as to where the securities are offered to the public and how disclaimers need to be designed.

³⁷ This could be important for the applicable law for prospectus liability.

³⁸ See Securities Act of 1933 § 5, *supra* note 25.

³⁹ Council Regulation 2017/1129, art. 3, 2017 O.J. (L 168) 12 (EU).

⁴⁰ See *id.* at art. 38.

⁴¹ Any company offering securities to the public is required to publish a comprehensive document, which is commonly referred to as “prospectus.” This document lays out all details regarding the securities and the issuer that might be relevant for making an informed investment decision. Before being published, this prospectus must be approved by the competent national regulator. Under U.S. law, this mechanism can be found in § 5 of the Securities Act of 1933, *supra* note 25.

⁴² See, for example, H. Anthony Park, *The Essential Principles for an Active Securities Regulation of Cryptocurrency* (last revised May 17, 2018), <http://perma.cc/SPM7-W3LQ>; Dirk A. Zetzsche et al., *The ICO Gold Rush: It's a Scam, It's a Bubble, It's a Super Challenge for Regulators*, 63 HARV. INT'L L.J. (forthcoming 2019).

market standards, codes of conduct, and regulation in general. However, before discussing new regulatory regimes, the question as to how ICOs fit into the current legal framework needs to be answered accurately. Otherwise, lawmakers might presume a need for regulatory reform that is, in fact, unnecessary. Similarly, lawmakers might be tempted to ignore the need for regulatory reform on the assumption that the markets are doing well. For the E.U., with its complicated amalgamation of Directives and Regulations, no convincing answer has yet been provided.

The technique for the application of securities regulation is similar in most jurisdictions. The first step is to define the type of unit or certificate to which the respective regulation applies. This definition is the gateway for the application of the full array of securities regulation (including, but not limited to, the obligation to publish a prospectus, the creation of prospectus liability, the prohibition of insider trading, and the authorization of financial intermediaries involved in token sales by national regulators). Under U.S. law, the crucial definition is “security”.⁴⁴ Under E.U. law, the equivalent is “transferable securities,” which is contained in European Directive 2014/65/EU on Markets in Financial Instruments.⁴⁵

This Article provides an in-depth examination of the financial markets regulation framework for ICOs in the E.U. This will be compared with the approach taken by the U.S. Securities and Exchange Commission (SEC) based on established principles of U.S. securities laws. We will try to reconcile the “substance over form” approach taken by the U.S. Supreme Court with the formalistic “black letter law” approach of E.U. regulation. We argue that it is possible to reach a widely congruent interpretation for the application of securities regulation in the U.S. and the E.U. This can be achieved by a purposeful approach to the definition of “transferable securities” under E.U. law.

In Section II of this Article, we will give a brief technical overview of crypto tokens by introducing the three categories of investment, utility, and currency tokens. Section III will outline the different approaches taken by national financial market regulators, focusing on the SEC. In Section IV we will analyze the possible application of E.U. financial markets regulation to crypto tokens. In Section V we will conclude with a summary.

⁴³ For an overview of current initiatives, see ERNST & YOUNG, EY RESEARCH: INITIAL COIN OFFERINGS (ICOs) 38 (2017), <http://perma.cc/Q733-3TDC>.

⁴⁴ Securities Act of 1933 § 2(a), *supra* note 25.

⁴⁵ Council Directive 2014/65, 2014 O.J. (L 173) 349 (EU).

II. TECHNICAL BACKGROUND

A. Tokenization in a Nutshell

Initial coin offerings have been made possible by a new way of storing information in a decentralized way in the so-called “blockchain.” Although this term suggests some kind of physical embodiment, the blockchain is data that is stored on computers. The technical basis of this idea is distributed ledger technology (DLT). In short, DLT describes a decentralized digital database.⁴⁶ It contains information records tied together in blocks. These blocks form the blockchain.⁴⁷ Every blockchain is based on the source code used by its creator, and the results can vary significantly. Some can have the sole purpose of creating new units in the chain while others resemble technology platforms, allowing companies to use the functions embedded in the source code for a wide range of applications. As of today, the most famous blockchains are arguably Bitcoin and Ethereum.

The blocks in the blockchain are often linked together via cryptography.⁴⁸ The use of cryptographic verification and dispersed storage makes it nearly impossible to change transaction data stored in the blockchain.⁴⁹ Each block contains a hash⁵⁰ of the previous block, the transaction data, and a timestamp. In many blockchain systems, computers must process a cryptographic task, consuming time and (indirectly) money, to generate a new block.⁵¹ The computers of the blockchain verify a new block before adding it to the chain. The amended chain is then dispersed throughout the network.⁵² This means that the information is stored either partly or in full on all computers that are connected to the network. This dispersion makes it nearly impossible to change block entries because doing so would require a massive coordinated approach to

⁴⁶ See Sloane Brakeville & Bhargav Perepa, *Blockchain Basics: Introduction to Distributed Ledgers*, IBM (Mar. 18, 2018), <http://perma.cc/6Z2S-HCYY>.

⁴⁷ See *id.*

⁴⁸ See Michael Mainelli, *Blockchain Could Help Us Reclaim Control of Our Personal Data*, HARV. BUS. REV. (Oct. 5, 2017), <http://perma.cc/ES8T-6PN9>.

⁴⁹ See Joshua S. Morgan, *What I Learned Trading Cryptocurrencies while Studying the Law*, 25 U. MIAMI INT'L & COMP. L. REV. 159, 175 (2017).

⁵⁰ A hash is a mathematically constructed unique fingerprint of a piece of data in the form of an alphanumeric string. For details, see *The Disruptor Series: Digital Currency and Blockchain Technology: Hearing Before the Subcomm. on Commerce, Mfg. & Trade of the H. Comm. on Energy & Commerce*, 114th Cong. 47 (2016) (statement of Paul Snow, Chief Architect and Co-Founder, Factom).

⁵¹ See Kevin Werbach & Nicolas Cornell, *Contracts Ex Machina*, 67 DUKE L.J. 313, 328 (2017).

⁵² See Zach Church, *Blockchain, Explained: An MIT Expert on Why Distributed Ledgers and Cryptocurrencies Have the Potential to Affect Every Industry*, MIT SLOAN SCH. OF MGMT. (May 25, 2017), <http://perma.cc/L2CC-7CW2>.

convince the majority of computers that the changed block contains the correct information. This principle also makes a blockchain immune to a loss of data because the breakdown of a single computer, or even several computers, storing the blockchain does not affect the network as a whole.

Blockchain technology has the potential to disrupt and change the way businesses operate.⁵³ One possible application is “smart contracts,” which are contracts that are in part or completely executed without human interaction.⁵⁴ Some countries are experimenting with land property registers based on the blockchain.⁵⁵ There could be further promising applications in the healthcare, real estate, or insurance sectors.⁵⁶ However, currently the most famous application is cryptocurrencies, and the most important implementation is the Bitcoin.⁵⁷ A cryptocurrency can be defined as a medium of exchange using the blockchain.⁵⁸ Because blocks can be added by users, they stand outside the control of the central banking system.⁵⁹ Users have a “wallet,” which is either a hardware device, a local application, or an online interface provided by a third party, containing the user’s private key.⁶⁰ The private key is known only to the user and is used to sign the cryptocurrencies that the user transfers.⁶¹ In order to send currencies, the sender needs the recipient’s address—the so-called public key.⁶² Using this principle, cryptocurrency items can be transferred between users.⁶³ They can also be used to “pay” for the transfer of other blockchain-based units.

⁵³ See *id.*

⁵⁴ See *id.*; Werbach & Cornell, *supra* note 51, at 313.

⁵⁵ See, for example, Molly Zuckerman, *Swedish Government Land Registry Soon to Conduct First Blockchain Property Transaction*, COINTELEGRAPH (Mar. 7, 2018), <http://perma.cc/U7CB-RMVA> (discussing that the Swedish land registry has been testing a Blockchain network to register land and properties on a “small scale,” and that the first real transaction is expected to take place in 2018).

⁵⁶ See Angela Wach, *The Path of the Blockchain Lexicon (and the Law)*, 36 REV. BANKING & FIN. L. 713, 737 (2017); S.H. Spencer Compton & Diane Schottenstein, *Questions and Answers about Using Blockchain Technology in Real Estate Practice*, 33 PRAC. REAL EST. L. 5, 7 (2017); Angela Garry Gabison, *Policy Considerations for the Blockchain Technology Public and Private Applications*, 19 SMU SCI. & TECH. L. REV. 327, 344 (2016).

⁵⁷ See Church, *supra* note 52.

⁵⁸ See Ramis Jamali et al., *Cryptocurrency | Digital Asset Class of the Future – Bitcoin vs. Ethereum?*, IVEY BUS. SCHOOL 5 (2016), <http://perma.cc/ZR96-TWSS>.

⁵⁹ See *Cryptocurrency*, INVESTOPEDIA, <http://perma.cc/X9LQ-PGNP>.

⁶⁰ See Joseph D. Moran, *The Impact of Regulatory Measures Imposed on Initial Coin Offerings in the United States Market Economy*, 26 CATH. U. J.L. & TECH. 1, 6 (2018).

⁶¹ See Stephen Small, *Bitcoin: The Napster of Currency*, 37 HOUS. J. INT’L. L. 581, 588 (2015) (comparing the private key to a personal identification number (PIN) for a debit card).

⁶² See *id.* (comparing the public key to an email address).

⁶³ See INVESTOPEDIA, *supra* note 59.

A new phenomenon is the broader term “token.” Tokens represent units of value, which means they stand in for something. Thus, cryptocurrencies can be considered a kind of token.⁶⁴ However, tokens can be used in a broader range of applications than currencies.⁶⁵ In contrast to currencies and cryptocurrencies, which represent value, but are not themselves of inherent value, some tokens give their owner particular rights or entitlements against another person (typically the issuer) or record the ownership of assets. Encrypting these rights on the blockchain is called “tokenization.”⁶⁶ To create tokens, it is not necessary to modify an existing protocol or create a blockchain from scratch. Instead, some existing blockchains (such as Ethereum) provide templates that allow persons or entities to create their own tokens.⁶⁷ Tokens that are based on one’s own blockchain are called “coins.” As the distinction between such coins and tokens using another blockchain is not relevant in terms of securities law, the following text only refers to “tokens.”

B. Token Categories

Tokenization can have a huge variety of outcomes. Over the last year, commentators have established three categories based on the existence or absence of certain features: currency tokens, utility tokens, and investment tokens.⁶⁸ The categorization is based on token functionality. They are not legal categories; the potential legal classification⁶⁹ is subject to national or, in the case of the E.U., supranational regulation. As it is possible to equip a token with different features, the result can be a hybrid. Hybrid tokens are particularly difficult to address via the current regulation.⁷⁰ According to a survey that included all ICOs between 2013 and March 2017, about seventy-five percent of

⁶⁴ See Iyke Aru, *Tokenization: The Force behind Blockchain Technology*, COINTELEGRAPH (Sept. 29, 2017), <http://perma.cc/AEH4-Q5PQ>.

⁶⁵ See *id.*

⁶⁶ See Addison Cameron-Huff, *Op Ed: How Tokenization Is Putting Real-World Assets on Blockchains*, BITCOIN MAG. (Mar. 30, 2017), <http://perma.cc/S677-F345>.

⁶⁷ See Rohr & Wright, *supra* note 22, at 20–21.

⁶⁸ See Alvaro Rivero, *Distributed Ledger Technology and Token Offering Regulation* 5–6 (Mar. 13, 2018), <http://perma.cc/T4WW-XGGG>; Lars Klöhn et al., *Initial Coin Offerings (ICOs)*, 30 ZEITSCHRIFT FÜR BANKRECHT UND BANKWIRTSCHAFT 89, 99 (2018); Iris M. Barsan, *Legal Challenges of Initial Coin Offerings*, 2017 REVUE TRIMESTRIELLE DE DROIT FINANCIER 54, 56-60 (identifying only two token categories: “currency like” and “security like”); Rohr & Wright, *supra* note 22, at 14–26 (distinguishing between “app tokens” and “protocol tokens”).

⁶⁹ For example, as “investment contract” under U.S. law or “transferable securities” under E.U. law.

⁷⁰ See the very lengthy analysis provided by Philipp Hacker & Chris Thomale, *Crypto-Securities Regulation: ICOs, Token Sales and Cryptocurrencies under EU Financial Law* 33–37 (last revised May 2, 2018), <http://perma.cc/5HAL-Z3KG>.

all tokens granted access to a service, about fifty percent were used as payment, and only about twenty-five percent granted profits based on an investment.⁷¹ Another study observed approximately forty-five percent payment tokens, thirty-five percent service tokens, and fourteen percent investment tokens.⁷² These diverging numbers are probably due to the lack of clearly defined categories.

Although they are often described as a kind of currency (thus resembling money), cryptocurrencies have a strong resemblance to a generally accepted unit of value, such as gold.⁷³ Because, in most cases,⁷⁴ cryptocurrencies are decentralized in nature, they lack the ongoing relationship with the issuer, which is a fundamental element of investment and utility tokens. Most of the existing cryptocurrencies are open source projects,⁷⁵ so there is no centralized issuer. The most famous example is Bitcoin. Currency tokens can be used for payment in transactions with anyone who is willing to accept them. The trust the market participant places in the currency token does not flow from the backing of a federal reserve bank, but from the fact that the blockchain technology underlying the crypto token is nearly impossible to manipulate.⁷⁶

Investment tokens give the owner the right to participate in the issuer's future returns. This could be payments similar to dividends, or fixed payments including a mark-up reflecting the investment risk. Another typical, albeit not necessary, feature is the conveyance of voting or other participation rights. These tokens resemble classical securities. A prominent example is the Decentralized Autonomous Organization (DAO).⁷⁷ In the DAO ICO, the funds raised were intended to be used to finance other projects, thus generating returns for DAO token subscribers. A group of people who were involved in issuing the DAO tokens (the "Curators") would preselect suitable projects. The token subscribers could then vote on which of these projects should be financed.⁷⁸

⁷¹ See *Token Rights: Key Considerations in Crypto-Economic Design*, SMITH & CROWN (Mar. 30, 2017), <http://perma.cc/2TDF-V8BW>.

⁷² See Zetzsche et al., *supra* note 42, at 8.

⁷³ See Peter Zickgraf, *Initial Coin Offerings – Ein Fall für das Kapitalmarktrecht?*, 63 DIE AKTIENGESELLSCHAFT 293, 296 (2018).

⁷⁴ Bitcoin, Monero, and Verge are examples of cryptocurrencies that are decentralized.

⁷⁵ See, for example, VERGE, <http://perma.cc/D3EV-8FWA>; *What is Monero?*, MONERO, <http://perma.cc/XWN3-EWRW>.

⁷⁶ See Barsan, *supra* note 68, at 57.

⁷⁷ An important aspect of the DAO ICO, which will not be discussed in further detail here, is that it was not directly linked to a registered company. Thus, technically speaking it was an ICO without an issuer. For discussion, see *id.*, at 62.

⁷⁸ See *id.*, *supra* note 68, at 58.

The third category is utility tokens. They offer a wide variety of benefits for the owner. This could be access to particular services offered by the company, such as the use of storage space (Filecoin). Utility tokens also often have elements of currency or investment tokens,⁷⁹ as demonstrated by the Munchee token, which allowed payment in restaurants (currency token) and incentivized food reviews (utility token), but also allowed secondary trading (investment token).⁸⁰

C. Initial Coin Offerings

As soon as an issuer has finished creating tokens (typically using an established platform such as Ethereum), the tokens can be advertised and sold. The standard procedure is that issuers manage the sale through an internet platform. By using smart contracts, investors can exchange cryptocurrencies for the new tokens.⁸¹ The advertising campaign primarily relies on social media channels.⁸² As a consequence, the targeted investor audience is younger and more tech-savvy than in traditional capital markets. It is standard market practice that the issuer publishes a so-called “white paper” on its website.⁸³ This document typically contains information about the issuer and its business, the available tokens, and the investments planned. Although some white papers are quite comprehensive, their level of detail cannot be compared with a prospectus required under securities regulation.⁸⁴ For example, while under securities regulation it is required that the prospectus contains detailed information about the issuer, this element is very often missing from white papers.⁸⁵ The established term for this whole process is ICO, quite obviously based on the introduction of securities on a stock exchange in an IPO.

For issuers, ICOs come with a range of advantages. First, they are marketed directly to the client, circumventing the typical range of financial intermediaries such as banks and stock exchanges. This increases the speed of the offering process while significantly cutting capital costs. Second, the

⁷⁹ The SEC concluded that the Munchee token was a security and ordered organizers to stop offering and selling it to the public.

⁸⁰ For a description of the SEC intervening to stop the Munchee ICO, see Press Release No. 2017-227, U.S. Sec. & Exch. Comm’n, Company Halts ICO after SEC Raises Registration Concerns (Dec. 11, 2017), <http://perma.cc/JSS2-37U5>.

⁸¹ See Moran, *supra* note 60, at 7; Aubrey K. Noonan, *Bitcoin or Bust: Can One Really “Trust” One’s Digital Assets?*, 7 EST. PLAN. & CMTY. PROP. L.J. 583, 593 (2015).

⁸² See Zickgraf, *supra* note 73, at 294.

⁸³ See Zetzsche, et al., *supra* note 42, at 10.

⁸⁴ See *id.*

⁸⁵ See *id.* at 11.

technology required is relatively simple and accessible. The ERC20 Token Standard,⁸⁶ a standardized Ethereum smart contract, allows the issue of a token using 57 lines of smart contract code.⁸⁷ Fewer than 100 lines of code seems to be typical in the industry.⁸⁸ These lower barriers allow for a “democratization” of capital markets⁸⁹ because market entry for issuers is facilitated. For example, an ICO can open the gate to capital markets for businesses that, due to their legal nature, are unable to be listed at a stock exchange (including, among others, partnerships or private limited companies). Third, fueled by the crypto bonanza, the amount of money that can be raised is far higher than with other fintech models, such as crowdfunding.⁹⁰ As ICOs can be offered to a global audience via the internet, they can theoretically raise even more funds than traditional IPOs, which are typically limited to a single stock exchange. Fourth, issuers seem to believe that they are not within the scope of financial market regulation, including prospectus requirements and disclosure/reporting obligations.⁹¹ It remains to be seen if this really is the case.

At the end of 2017, the U.S. was the central hub for ICOs. Issuers from the U.S. raised more than \$1 billion.⁹² In the E.U. member states, \$575 million was raised, followed by Russia (\$310 million), Singapore (\$260 million), the People’s Republic of China (\$256 million), and Hong Kong (\$196 million).⁹³ In terms of number of token sales, the E.U. member states came first (125 ICOs), followed by the U.S. (76), Singapore (37), Russia (33), and Switzerland (32).⁹⁴ This demonstrates (maybe against common perception)⁹⁵ that the E.U. is also a central hub for ICOs.⁹⁶

⁸⁶ See *ERC20 Token Standard*, ETHEREUMWIKI, <http://perma.cc/9DPB-ZFBD>.

⁸⁷ Rohr & Wright, *supra* note 22, at n. 1.

⁸⁸ See Zickgraf, *supra* note 73, at 295; Rohr & Wright, *supra* note 22, at 21.

⁸⁹ See Rohr & Wright, *supra* note 22. A similar point has been made with respect to crowdfunding, see Alma Pekmezovic & Gordon Walker, *The Global Significance of Crowdfunding: Solving the SME Funding Problem and Democratizing Access to Capital*, 7 W. & M. BUS. L. REV. 347 (2016).

⁹⁰ The average crowdfunding campaign only raises about \$7000, see *Crowdfunding Statistics*, FUNDABLE, <http://perma.cc/AK36-T72N>.

⁹¹ See Zetzsche et al., *supra* note 42, at 11 (“Almost all ICOs rely on legislative loopholes or, more accurately, what the issuing entity hopes (or prays) is a loophole or grey area.”).

⁹² See ERNST & YOUNG, *supra* note 43, at 7.

⁹³ See *id.*

⁹⁴ See Max Galka, *Token Sale Geography*, ELEMENTUS (Dec. 30, 2017), <http://perma.cc/89C7-YJ7H>.

⁹⁵ It is obvious that websites with statistics on ICOs and token sales focus on particular countries in Europe. See, for example, ERNST & YOUNG, *supra* note 43, at 7. However, from a legal perspective this is inaccurate because the E.U. provides a uniform legal framework for ICOs.

⁹⁶ For another study identifying that 20% of all ICOs are based in the E.U., confirming this conclusion, see Zetzsche et al., *supra* note 42, at 13.

D. Consequences

The parallels between ICOs and IPOs are obvious, exceeding the similarity in nomenclature. In particular, an offer of tokens to the public exhibits the same information asymmetries as between issuers and investors. The mitigation of information asymmetries is a core concept of financial markets regulation. These asymmetries can lead to negative results for the market as a whole.⁹⁷ The potential lack of regulation and enforcement is particularly tempting for scammers and other miscreants because misconduct will mostly go unpunished. This is commonly referred to as the moral hazard problem.⁹⁸ When an industry or particular investment vehicle develops a reputation of being a stomping ground for fraudsters, investor confidence might deteriorate. These developments call for investor protection and the promotion of market efficiency, which are two of the main objectives of financial markets regulation.⁹⁹ Some commentators are also warning of an ICO “bubble” that may burst soon.¹⁰⁰ The crash of the Bitcoin market in 2017-2018, when the price dropped to less than half of its December 2017 value,¹⁰¹ was probably a warning sign. Moreover, ICOs are vulnerable to money laundering and terrorist financing due to the almost anonymous nature of the transactions and the large sums involved.

At the time of publication, the overall ICO volume already exceeds \$20 billion, and no end to growth is in sight. Given the current market developments, it is quite likely that established companies will see ICOs as a viable option to raise capital. It would be a severe inconsistency if a listed company is subject to the full brunt of financial markets regulation, while a company issuing tokens that are tradable, and would essentially give their owner shareholder rights, would not be covered by regulation. If an unregulated parallel market for securities-like tokens emerges, the burst of a bubble could have

⁹⁷ See George Akerlof, *The Market for Lemons: Quality Uncertainty and the Market Mechanism*, 84 Q.J. ECON. 488 (1970) (describing the so-called “lemons problem”); see also Bernard Black, *The Legal and Institutional Preconditions for Strong Securities Markets*, 48 UCLA L. REV. 781, 786 (2001) for an identification of unregulated securities markets as good candidates for lemons.

⁹⁸ See Zetsche et al., *supra* note 42, at 15 for a description that many white papers do not include information about the financial situation of the issuer. For example, over ninety-six percent of white papers remained silent about the way the money is collected from investors (pooling vs. segregation).

⁹⁹ See OICV-IOSCO, OBJECTIVES AND PRINCIPLES, *supra* note 24, at 3.

¹⁰⁰ See, for example, Jim Edwards, *This Is the Tech Bubble We Have Been Waiting For*, BUSINESS INSIDER (Nov. 21, 2017), <http://perma.cc/LJ3Y-S748>.

¹⁰¹ See Frances Coppola, *Bitcoin's Bubble Is Bursting. How Low Will Prices Fall?*, FORBES (Mar. 20, 2018), <http://perma.cc/7SB5-2QC6>.

catastrophic consequences.¹⁰² Therefore token regulation is also an issue of systemic stability. Thus, it is beyond question that ICOs should be subject to financial markets regulation in principle.

III. REGULATORS' APPROACHES

The basic problem with token regulation is that tokens are offered via the internet and are thus a worldwide operation. In contrast, financial markets regulation, supervision, and enforcement are still subject to national laws. Although common principles have been established in recent decades,¹⁰³ the intricacies and definitions of the national frameworks still vary. Even more importantly, national regulators and courts may interpret statutory rules and case law differently. A second problem is that national regulators would find it particularly difficult to take action against token offers managed by entities based in a foreign country. For example, the U.K. Financial Conduct Authority (FCA) seems to be painfully aware of its limited powers, stating laconically that ICOs “might be based overseas.”¹⁰⁴

Thus, it is not only important that national regulators provide guidance for the application of securities laws; it is also highly desirable that these regulators try to find common ground by establishing comparable tests and guidelines for the application of securities laws to ICOs. Based on a common understanding, cooperation between national agencies can be intensified, ideally resulting in a harmonized application of national securities laws that are not consistent on paper. Harmonization efforts between regulators are typically carried out by the International Organization of Securities Commissions (IOSCO), the umbrella organization of national financial markets regulators.¹⁰⁵ At the time of writing this paper, the IOSCO had not published its view on the regulation of ICOs.

In other words, although there is a growing consensus between national regulators that tokens need to be regulated in principle, as will be discussed in the following paragraph, there is no consensus about how exactly crypto tokens fit into the current securities law frameworks. As will be demonstrated in this Section, some regulatory authorities (for example, in the U.S. and Singapore) have made their views clear, while others (particularly in Europe) remain vague.

¹⁰² For more details on the size and structure of the emerging market and the resulting systemic risk, see Zetzsche et al., *supra* note 42, at 17–20.

¹⁰³ See, for example, OICV-IOSCO, OBJECTIVES AND PRINCIPLES, *supra* note 24, for the principles of international securities regulation.

¹⁰⁴ U.K. FIN. CONDUCT AUTHORITY, *Distributed Ledger Technology – Feedback Statement on Discussion Paper 17/03*, at 15 (Dec. 2017), <http://perma.cc/U92Q-VVJZ>. It is not surprising that the U.K. FCA highlights its limited competencies when stating that ICOs “might be based overseas.”

¹⁰⁵ See OICV-IOSCO, FACT SHEET, *supra* note 23.

It will also be demonstrated that two different understandings of “securities” are applied, either focusing on the investment or on the tradability in capital markets.

A. U.S. Securities and Exchange Commission

The SEC was the first regulator to take a clear stance regarding the application of U.S. securities laws to token sales.¹⁰⁶ On July 25, 2017, the SEC released a report regarding the application of U.S. securities laws to the DAO token.¹⁰⁷ The DAO is a network of smart contracts designed in Germany in 2016. The tokens gave investors the possibility to suggest how the raised funds should be invested. The tokens also granted voting rights regarding the proposals and participation rights in future profits.¹⁰⁸ The important point here is that the DAO token exhibited some similarities to a share, but also to a collective investment scheme.

The issue was whether the DAO token was an “investment contract,” which is a catchall¹⁰⁹ subcategory of the term “security,” the fulcrum for the application of U.S. securities laws. It is designed to apply to new and innovative financial vehicles that do not have the form of classical securities (such as shares or bonds), but convey similar rights. The SEC applied the *Howey* test established by the U.S. Supreme Court in 1946.¹¹⁰ The test involves four factors that all need to be present for there to be an investment contract: (1) the investment of money, (2) a common enterprise, (3) a reasonable expectation of profit, and (4) profit derived from the managerial efforts of others.¹¹¹ It is a typical example of a flexible “substance over form” approach¹¹² because it focuses on the outcome of a transaction and not its appearance. Interestingly, the Canadian

¹⁰⁶ The SEC even set up a mock ICO (“HoweyCoin”) to warn investors against ICO scams. *See* Press Release No. 2018-88, U.S. Sec. & Exch. Comm’n, The SEC Has an Opportunity You Won’t Want to Miss: Act Now! (May 16, 2018), <http://perma.cc/6A88-9NS4>.

¹⁰⁷ *See* U.S. Sec. & Exch. Comm’n, Release No. 81207, Report of Investigation Pursuant to Section 21(a) of the U.S. Securities Exchange Act of 1934: The DAO (July 25, 2017), <http://perma.cc/C8V7-JNJJ>.

¹⁰⁸ For more detailed discussion, *see* Hacker & Thomale, *supra* note 70, at 10–11; Rohr & Wright, *supra* note 22, at 24–25.

¹⁰⁹ *See* Rohr & Wright, *supra* note 22, at 43.

¹¹⁰ SEC v. W.J. Howey Co., 328 U.S. 293 (1946). This test was later refined in SEC v. Edwards, 540 U.S. 389 (2004). For detailed discussion, *see* JOHN C. COFFEE & HILLARY A. SALE, SECURITIES REGULATION – CASES AND MATERIALS 247-269 (12th ed. 2012).

¹¹¹ *See id.*

¹¹² *See* United Hous. Found., Inc. v. Forman, 421 U.S. 837, 849 (1975) (“Because securities transactions are economic in character Congress intended the application of these statutes to turn on the economic realities underlying a transaction, and not on the name appended thereto.”).

Securities Administrators (CSA) released a notice on August 24, 2017, stating that they apply exactly the same test to Canadian ICOs.¹¹³

In short, the SEC found that the tokens issued by the DAO amounted to an investment contract and were hence securities. Investors paid for the DAO tokens using Ethereum tokens, which is a contribution of value and thus an “investment of money.”¹¹⁴ The SEC argued that the DAO was a for-profit undertaking. The token holders stood to share in potential profits from the contracts. This constituted a “common enterprise” and a “reasonable expectation of profits.”¹¹⁵ These profits were to be derived from the German company Slock.it (which was involved in setting up the DAO project) and the DAO Curators (a group of people chosen by Slock.it whose task was to review suggested investment projects).¹¹⁶ The SEC found that, although the investment decisions were made by the token holders, Slock.it and the DAO Curators made significant contributions to the process. Therefore, the expected profits were derived from the managerial efforts of others. As no valid exemptions applied,¹¹⁷ the DAO token was required to be registered with the SEC.

A few months later, the SEC reiterated its stance in the Munchee order.¹¹⁸ It found that the tokens (the MUN tokens) were offered and sold in violation of securities laws.¹¹⁹ Similar to the DAO investigation, the SEC argued that the MUN tokens were investment contracts. The important difference is that the MUN tokens gave their holders several rights, including utility rights. The SEC took the view that the fact that the MUN tokens had a “practical use ... would not preclude the token from being a security.”¹²⁰

In essence, the SEC has confirmed that what are typically referred to as investment tokens (for example, DAO) and hybrid investment/utility tokens (for example, Munchee) are subject to U.S. securities laws. The SEC applied a particularly wide understanding, especially regarding hybrid tokens. The SEC did not restrict its jurisdiction to ICOs in the U.S. As a result, all ICOs, irrespective of their country of origin, could potentially end up in the SEC’s crosshairs. The

¹¹³ See CANADIAN SEC. ADM’RS, *Cryptocurrency Offerings* (CSA Staff Notice 46-307, Aug. 24, 2017), <http://perma.cc/NP5C-FT73>.

¹¹⁴ SEC REPORT: THE DAO, *supra* note 107, at 11.

¹¹⁵ *Id.* at 11–12.

¹¹⁶ *See id.* at 12–15.

¹¹⁷ *See id.*

¹¹⁸ U.S. Sec. & Exch. Comm’n, Release No. 10445, Order Instituting Cease-and-Desist Proceedings Pursuant to Section 8(a) of the Securities Act of 1933, Making Findings, and Imposing a Cease-and-Desist Order, In the Matter of Munchee, Inc. (Dec. 11, 2017), <http://perma.cc/T52S-PRXQ>.

¹¹⁹ *See id.* at 9.

¹²⁰ *Id.*

markets reacted quickly, and various ICOs started to ban U.S. investors from subscribing for tokens.¹²¹

B. E.U. Regulators

The pivotal term of E.U. financial markets regulation is “transferable securities.” For example, E.U. prospectus regulation applies to offers of securities to the public.¹²² Directive 2014/65/EU on Markets in Financial Instruments (MiFiD2) revolves around “financial instruments,” which pursuant to section C of annex I includes “transferable securities.”¹²³ Regulation (EU) 596/2014 on Market Abuse (MAR) also applies to “financial instruments” as defined under MiFiD2.¹²⁴ Thus, the question is whether tokens are “transferable securities” within the meaning of the uniform definition under E.U. financial regulation. It is obvious from the wording that the definition is based on the transfer of units in the secondary market, not on the underlying investment characteristics. This is a major deviation from the U.S. approach which focuses on the “investment contract.”

It is important to note that market supervision and law enforcement are still vested in the national financial markets regulators of the E.U. member states. The European Securities and Markets Authority (ESMA) is, *inter alia*, tasked with the promotion of supervisory convergence and the consistent application of market rules.¹²⁵ However, front line regulation is still carried out by national agencies. The result is that financial markets supervisors in the E.U. are not speaking with one voice.

1. European Union (ESMA)

The ESMA published information regarding tokens sales in November 2017.¹²⁶ However, it remained vague, stating that “... where the coins or tokens qualify as financial instruments it is likely that the firms involved in ICOs conduct regulated investment activities.”¹²⁷ Potentially applicable E.U. regulation includes prospectus regulation, financial intermediaries regulation, fund

¹²¹ See Wendy McElroy, *Some ICOs Now Ban Americans – Who Should Expect More Ostracism*, BITCOIN.COM (July 18, 2017), <http://perma.cc/X7NJ-8B7G>.

¹²² Council Regulation 2017/1129, *supra* note 39, at art. 1(1).

¹²³ Council Directive 2014/65, art. 2(1), 2014 O.J. (L 173/349) (EU).

¹²⁴ See Council Directive 596/2014, art. 3(1)(1), 2014 O.J. (L 173/1) (EU).

¹²⁵ *Who We Are*, EUROPEAN SECURITIES AND MARKETS AUTHORITY, <http://perma.cc/482A-9EJB>.

¹²⁶ ESMA alerts firms involved in Initial Coin Offerings (ICOs) to the need to meet relevant regulatory Requirements (Doc. No. ESMA50-157-828 EUROPEAN SECURITIES AND MARKETS AUTHORITY, <http://perma.cc/A4BP-9QS4>.

¹²⁷ *Id.* at 1.

managing regulation and anti-money laundering regulation. Precise guidance as to which tokens were “financial instruments” was not provided.

2. United Kingdom (FCA)

In 2017, the Financial Conduct Authority (FCA) conducted a consultation on distributed ledger technology. In Annex 1 of the resulting feedback document it published some regulatory considerations on ICOs.¹²⁸ It highlighted that carrying out regulated activity relating to investments without obeying the relevant rules was a criminal offense.¹²⁹ However, the FCA remained rather generic on the classification of tokens, stating that some tokens may constitute transferable securities and therefore may fall within the prospectus regime.¹³⁰ The FCA also issued general consumer warnings about ICOs,¹³¹ in addition to specific warnings about investing in cryptocurrency contracts for difference.¹³² This cautious approach is surprising because the FCA is generally positive on the use of new technology in the financial markets.¹³³ In April 2018, the FCA released additional guidance regarding derivative contracts on cryptocurrencies, making it clear that derivatives on crypto tokens are transferable securities and that providing financial services in this regard requires formal authorization.¹³⁴

3. Germany (BaFin)

The German BaFin issued guidance in February 2018.¹³⁵ It went into more detail than its U.K. counterpart. All tokens needed to be assessed on a case-by-case basis,¹³⁶ which means that the BaFin avoided far-reaching statements about the classification of tokens. However, tokens granting shareholders’ rights or comparable rights could be classified as securities.¹³⁷ Derivatives on tokens

¹²⁸ FCA, *supra* note 104, at 28.

¹²⁹ *Id.* at 29.

¹³⁰ *Id.* at 28.

¹³¹ *Consumer warning about the risks of Initial Coin Offerings (ICOs)*, U.K. FINANCIAL CONDUCT AUTHORITY (Sept. 12, 2017), <http://perma.cc/4YV4-4XJG>.

¹³² *Consumer warning about the risks of investing in cryptocurrency CFDs*, U.K. FINANCIAL CONDUCT AUTHORITY (Nov. 14, 2017), <http://perma.cc/5ZQ4-LRPA>.

¹³³ *See, for example, FCA Innovate*, U.K. FINANCIAL CONDUCT AUTHORITY, <http://perma.cc/MYK4-AG5C>.

¹³⁴ *Cryptocurrency derivatives – FCA statement on the requirement for firms offering cryptocurrency derivatives to be authorised*, U.K. FINANCIAL CONDUCT AUTHORITY (Apr. 6, 2018), <http://perma.cc/G8GV-UDB2>.

¹³⁵ Bundesanstalt für Finanzdienstleistungsaufsicht, *Initial Coin Offerings: Hinweisschreiben zur Einordnung als Finanzinstrumente*, Doc. No. WA 11-QB 4100-2017/0010 (Feb. 20, 2018), <http://perma.cc/A2B9-TZ76>.

¹³⁶ *Id.* at 2.

¹³⁷ *Id.*

would be classified as financial instruments and thus subject to financial markets regulation. In addition, it classified crypto exchanges as multilateral trading facilities,¹³⁸ meaning they would require authorization by the national regulators.¹³⁹

4. France (AMF)

In October 2017, the French Autorité des Marchés Financiers (AMF) published a discussion paper on ICOs.¹⁴⁰ The AMF remarked that tokens may be classified “as equity securities if they bestow the same economic and governance rights as those traditionally attached to shares or preference shares.”¹⁴¹ Additionally, the AMF argued that tokens could also in principle be classified as debt securities.¹⁴² However, the AMF concluded that at the time of publishing the paper, the tokens issued in France would not be classified as securities and thus would not fall under French regulations.¹⁴³ Similarly to the FCA and BaFin, the AMF took the view that crypto derivatives are securities and subject to financial markets regulation.¹⁴⁴

C. Singapore

In August 2017, the Monetary Authority of Singapore (MAS) issued a notice stating that if a token constitutes a product regulated under securities laws administered by the MAS, the offer needs to comply with the applicable securities laws.¹⁴⁵ In November 2017, the MAS published a more detailed analysis.¹⁴⁶

¹³⁸ *Id.* at 4.

¹³⁹ This view flows from a particularity of German law, classifying “units of account” as financial instruments. “Units of account” are units similar to foreign currencies outside the scope of German currency regulation; for further discussion. *See* Barsan, *supra* note 68, at 55. The “unit of account” has no equivalent under E.U. law, so BaFin’s approach is not relevant for the classification of crypto exchanges under E.U. law.

¹⁴⁰ *Discussion Paper on Initial Coin Offerings*, AUTORITÉ DES MARCHÉS FINANCIERS (Oct. 26, 2017), <http://perma.cc/4BHQ-KHP7>.

¹⁴¹ *Id.* at 7.

¹⁴² *Id.* at 7–8.

¹⁴³ *Id.* at 8.

¹⁴⁴ *Analysis of the legal qualification of cryptocurrency derivatives*, AUTORITÉ DES MARCHÉS FINANCIERS (Mar. 23, 2018), <http://perma.cc/HP6P-BNDV>.

¹⁴⁵ *MAS clarifies regulatory position on the offer of digital tokens in Singapore*, MONETARY AUTHORITY OF SINGAPORE (Aug. 1, 2017), <http://perma.cc/49KV-3EZK>.

¹⁴⁶ *A Guide to Digital Token Offerings*, MONETARY AUTHORITY OF SINGAPORE (Nov. 14, 2017), <http://perma.cc/3Z6E-BB3C>.

The applicable Singaporean law for offers of securities is contained in the Securities and Futures Act (SFA). The key definition of a security is a “capital markets product,” which is defined in section 2(1) SFA, *inter alia*, as “any securities, futures contracts, contracts or arrangements for the purposes of foreign exchange trading ... and such other products as MAS may prescribe as capital markets products.”¹⁴⁷ Typical examples are shares, debentures, and units in a collective investment scheme.¹⁴⁸ The MAS also addressed token sales from outside Singapore. Operators of such extraterritorial platforms for ICOs may also be subject to the SFA and its requirements.¹⁴⁹

The MAS included six case studies in its release, providing guidance for typical and non-typical token sales.¹⁵⁰ Although the MAS labeled the case studies as not indicative, conclusive, or exhaustive,¹⁵¹ the case studies give an excellent idea of the MAS’s views. For example, tokens comparable to shares would be considered securities (Case 2), while tokens granting access to company services would not (Case 1). The MAS also emphasized that tokens resembling loan agreements would be classified as debentures and thus securities (Case 5). If token offers are not accessible in Singapore (in other words, the tokens will not be offered to any person in Singapore), the SFA will not apply (Case 4). In several cases the MAS pointed out that services revolving around the ICO (for example, facilitating the purchase or providing financial advice) would most likely result in the need to obtain a Singaporean capital markets license. The MAS did not go into detail regarding the classification of hybrid tokens. Thus, some commentators presume that the MUN token, which only granted limited investment rights, would most likely not have been classified as a security.¹⁵²

D. Australia

The Australian Securities and Investments Commission (ASIC) issued a guidance statement in October 2017.¹⁵³ The most relevant definition is “security,” pursuant to section 700 of the Corporations Act 2001 (Cth), which

¹⁴⁷ *Id.* at § 2.1.

¹⁴⁸ *Id.* at § 2.3.

¹⁴⁹ *Id.* at § 2.12.

¹⁵⁰ *Id.* at § 4.

¹⁵¹ *Id.* at § 4.1.

¹⁵² See Rohr & Wright, *supra* note 22, at 94 (“Although the guidance is limited, it appears that Munchee tokens would not have been treated as securities under Singapore’s laws...”).

¹⁵³ *Initial coin offerings*, AUSTRALIAN SECURITIES & INVESTMENT COMMISSION (Oct. 11, 2017), <http://perma.cc/L8Z9-BNDA>.

refers to section 761A of the Act.¹⁵⁴ ASIC stated that if the rights attached to the coin are similar to rights commonly attached to a share, then it is likely that the coins could fall within the definition of a share. Such rights could be ownership of the body, voting rights in decisions of the body or some right to participate in profits of the body.¹⁵⁵

ASIC also considered whether a public token offer and the ensuing investments might constitute a managed investment scheme (MIS) as defined in section 9 of the Corporations Act. In broad terms, an MIS requires people to contribute assets such as digital currency to obtain an interest in the scheme. These assets are pooled together with one or more other contributors, or used in a common enterprise, to produce financial benefits or interests in property. The contributors do not have day-to-day control over the operation of the scheme but, at times, may have voting rights or similar rights.¹⁵⁶ ASIC took the view that a “right” is to be interpreted broadly and includes rights that may arise in the future or on a contingency, and even rights that are not legally enforceable.¹⁵⁷ If the value of the coin is related to the management of the arrangement, the issuer of the ICO is likely to be offering an MIS.¹⁵⁸ In practice, most ICOs will meet these requirements,¹⁵⁹ making the token offerings subject to Australian securities laws.

E. New Zealand

Similar to ASIC, the New Zealand Financial Markets Authority (FMA) focused on whether investment tokens can be debt securities or equity securities, repeating the definitions given in section 8 of the Financial Conduct Act 2013 (NZ) without going into much detail.¹⁶⁰ More significantly, the FMA also discussed whether utility tokens are “managed investment tokens” under section 9.¹⁶¹ The three key requirements are: (1) the investment of money or cryptocurrency, (2) the provision of returns, income and rewards to the

¹⁵⁴ Corporations Act 2001 (Cth) s 700 (Austl.). The definition of “shares” and “securities” is convoluted. For a more detailed discussion in the ICO context, see Gordon Walker, *Crowd-Sourced Funding, Cryptocurrencies and Initial Coin Offerings in Australia and New Zealand*, 36 CO. & SECURITIES L.J. 1, 5–7 (2018).

¹⁵⁵ AUSTRALIAN SECURITIES & INVESTMENT COMMISSION, *supra* note 153, at 2.

¹⁵⁶ *Id.* at 2.

¹⁵⁷ *Id.*

¹⁵⁸ *Id.*

¹⁵⁹ Walker, *supra* note 154, at 115–17.

¹⁶⁰ Financial Conduct Act 2013, s 8 (N.Z.). *Initial Coin Offers*, FINANCIAL MARKETS AUTHORITY, <http://perma.cc/V27L-J7YP>.

¹⁶¹ *See also* Walker, *supra* note 154, at 116–17.

investors, and (3) that investors do not have day-to-day control over the project/business.¹⁶² This will typically apply to investment tokens. In the eyes of the FMA, tokens are not considered managed investment products simply because they can be traded on a cryptocurrency exchange or other secondary market.¹⁶³ In addition, offering utility tokens through an ICO typically involves the financial service of “operating a value transfer service” and/or “issuing and managing a means of payment.”¹⁶⁴ As a result, New Zealand’s financial intermediaries regulation may apply.

F. Discussion

While it is not surprising that various national securities law frameworks apply different terminology, the structures are highly comparable. The SEC’s investigations and orders have set the tone for the debate on tokens under securities laws. The pivotal term “investment contract” is a subcategory of the general term “security.” Singapore, Australia, and New Zealand follow a two-tier approach, distinguishing between tokens as securities and tokens as collective investment agreements. This seems to differ from the approach taken by the SEC. However, in these three jurisdictions the relevant issue is about investment, at least in principle, allowing a distinction between the three token categories. This is very similar to U.S. law.

However, the E.U. framework is an outlier. By focusing on the tradability of tokens on the secondary capital market, the E.U. framework completely differs from the investment-based approach taken by the other jurisdictions discussed above. E.U. regulators remain vague and stress the need for a case-by-case assessment, which makes the legal situation even more confusing. Apart from the rather special case of crypto derivatives, no strong statement on the regulatory nature of tokens has been made. Issuers and investors are left alone with a vague “maybe tokens are securities.” This is not satisfying for market participants.

It is our view that the SEC’s approach is sensible. Its strict application of established case law to token sales might be unpopular among issuers, but it is logical, predictable, and provides a high level of investor protection. Lowering the regulatory standards for token sales could lead to a “race to the bottom”¹⁶⁵

¹⁶² FINANCIAL MARKETS AUTHORITY, *supra* note 160.

¹⁶³ *Id.*

¹⁶⁴ *Id.*

¹⁶⁵ The “race to the bottom” was an argument raised in the wake of the internationalization of securities markets in the 1990s. It criticized the idea of countries competing for foreign investment by framing their securities laws in a particular fashion that would be beneficial to investors. For an overview, see Rhys Bollen, *International Standard-setting and the Regulation of Hedge*

with potentially severe consequences for the stability of the financial markets. The result would be a regulatory patchwork that enables issuers to structure an ICO in a way that allows the sale of tokens subject to jurisdictions with a low regulatory burden. The worst-case scenario would be a shift of ICO activities towards “ICO havens,” making it impossible for investors to gain redress for misleading or fraudulent token sales. The result of this mechanism can already be observed in the U.S. ICO market. It is a reasonable assumption that the strict SEC enforcement policies are the major driver of token issuers leaving the U.S. market.¹⁶⁶

Instead, we suggest an approach that has been described in the past as the “race toward the hegemon.”¹⁶⁷ As scholar Rhys Bollen argues, “[e]xperience shows that the standard of the most powerful player is often the one that dominates in a network.”¹⁶⁸ In international financial markets this is usually the U.S. or the E.U. This is because these economic areas had the best-developed capital markets in the 1990s when the internationalization and standardization of the capital markets gained momentum. As shown in Section II, these two economic areas are again arguably the two most important hubs for token sales. Obviously, countries such as Singapore, Russia, Australia, Switzerland, and Israel are also important. However, none of them alone has developed an ICO market that can be compared to the U.S. or the E.U.

Thus, the questions we ask are: how do tokens fit exactly into the E.U. framework of “transferable securities”? Is it possible to classify tokens in the E.U. in a similar fashion as in the *Howey* test? Is it possible to reconcile E.U. and U.S. securities laws? These issues will be discussed in Section IV of this Article.

IV. TOKENS AS “TRANSFERABLE SECURITIES” UNDER EU LAW

A. Black-Letter Law vs. Substance over Form

As discussed in Section III of this Article, the central definition for the application of E.U. securities regulation is ‘transferable security’ pursuant to Article 4(1)(44) MiFiD2. In contrast to U.S. securities regulation, its E.U. counterpart rests on a black-letter law approach. This means that statutory requirements within the regulation are set out in exacting detail. These

Funds: Part II, 28 COMPANY AND SEC. L.J. 370, 372–77 (2010); Eric C. Chaffee, *Finishing the Race to the Bottom: An Argument for the Harmonization and Centralization of International Securities Law*, 40 SETON HALL L. REV. 1581 (2010).

¹⁶⁶ Zetzsche et al., *supra* note 42, at 12.

¹⁶⁷ David Lazer, *Regulatory Interdependence and International Governance*, 8 J. EUR. PUB. POL’Y 474, 479–80 (2001).

¹⁶⁸ Bollen, *supra* note 165, at 376.

requirements leave little leeway for discretion. E.U. lawmakers employed these detailed justifications because they wanted to achieve a uniform interpretation of securities laws within E.U. member states. This black-letter approach usually provides a high level of legal certainty for the markets. A “substance over form” approach, as taken by the U.S. Supreme Court, would be in conflict with the desired harmonization in the E.U. because courts in different E.U. member states could come up with different approaches, resulting in a regulatory patchwork.

It would be desirable if the *Howey* test as applied by the SEC and the E.U. definition of “transferable securities” would come to similar results regarding the classification of tokens. However, the E.U.’s black-letter approach does not relate to requirements such as the “reasonable expectation of profit” and “profit derived from the managerial efforts of others.” Instead, the E.U. definition focuses on the transfer of securities. This leaves little room to use principles and tests developed in the U.S. because the applicable E.U. regulation is too narrow. E.U. regulators and courts are unable to simply adopt the *Howey* test because it is not compatible with the wording of the respective E.U. law. Aligning the classification of ICOs in the most important regions for ICOs would be a huge step towards setting a global standard. Desired harmonization between E.U. and U.S. financial markets regulation needs to start with the wording of the applicable E.U. rules, interpreting them in a way that brings the legal framework more into line with the U.S. approach, and using established statutory interpretation techniques to avoid undesired results.

B. Negotiability on the Capital Market

Article 4(1)(44) MiFiD2 defines “transferable securities” as follows:

... those classes of securities which are negotiable on the capital market, with the exception of instruments of payment, such as:

- (a) shares in companies and other securities equivalent to shares in companies, partnerships or other entities, and depositary receipts in respect of shares;
- (b) bonds or other forms of securitised debt, including depositary receipts in respect of such securities;
- (c) any other securities giving the right to acquire or sell any such transferable securities or giving rise to a cash settlement determined by reference to transferable securities, currencies, interest rates or yields, commodities or other indices or measures.¹⁶⁹

These requirements will be discussed in more detail in the following subsection. Importantly, no definition of “securities” as such is provided. To our

¹⁶⁹ MiFiD2, *supra* note 123, art. 4(1)(44).

knowledge, there has not been a single decision of the Court of Justice of the E.U. (CJEU) regarding the definition of securities in general. This results in uncertainty for market participants and requires a very careful approach to the definition.

1. Transferability

In order to be negotiable, a security needs to be transferable. This means that there cannot be any obstacles that make the transfer impossible and there cannot be any dependency on the fulfilment of certain formal criteria such as notarial certification.¹⁷⁰ The units do not require a physical embodiment, such as a certificate, to be transferable.¹⁷¹ Hence the non-tangible nature of tokens is not an issue in terms of transferability.¹⁷²

The transferability of tokens can be restricted by the issuer. However, non-transferability would only result if the unit cannot be transferred at all. A mere contractual restraint, such as a contractual prohibition of transfer or a required approval of transfer by the issuer,¹⁷³ does not change the fact that tokens are generally transferable.¹⁷⁴ Some issuers equip tokens with mechanisms that make the transfer technically impossible (so-called “lockup”).¹⁷⁵ In these cases, ownership of the token remains, and can only remain, with the subscriber. As this permanently rules out transfers, these tokens are not transferable securities pursuant to Article 4 MiFiD2.¹⁷⁶ As a consequence, E.U. financial markets regulation does not apply. This is a significant difference from the *Howey* test under U.S. securities regulation, which does not relate to transferability at all.

¹⁷⁰ WOLFGANG GROß, KAPITALMARKTRECHT § 2 WpPG ¶ 3 (6th ed. 2016); Andreas Fuchs *in* WpHG § 2 ¶ 15 (Andreas Fuchs ed., 2d ed. 2016); for discussion against the need for simple transferability, see Heinz-Dieter Assmann *in* WERTPAPIERHANDELSGESETZ § 2 ¶ 8, 10 (Heinz-Dieter Assmann & Uwe H. Schneider eds., 6th ed. 2012).

¹⁷¹ Gregor Roth *in* KÖLNER KOMMENTAR ZUM WpHG § 2 ¶ 37 (Heribert Hirte & Thomas Möllers eds., 2d ed. 2014); Wolf von Kopp-Colomb & Jörg Schneider *in* WERTPAPIERPROSPEKTGESETZ/VERMÖGENSANLAGENGESETZ § 2 WpPG ¶ 9 (Heinz-Dieter Assmann et al. eds., 3rd ed. 2017); ROBERT MÜLLER, WERTPAPIERPROSPEKTGESETZ § 2 ¶ 2 (2d online ed. 2017); GROß, *supra* note 170, at § 2 WpPG ¶ 3. However, a certificate is typically required by stock exchange listing rules.

¹⁷² BAFIN, *supra* note 139; *see also* Zickgraf, *supra* note 73 at 299.

¹⁷³ Fuchs, *supra* note 170, at § 2 ¶ 32; von Kopp-Colomb & J. Schneider, *supra* note 171, at § 2 WpPG ¶ 13; Anna Heidelbach *in* KAPITALMARKTRECHTS-KOMMENTAR § 2 WpPG para. 5 (Eberhard Schwark & Daniel Zimmer eds., 4th ed. 2010).

¹⁷⁴ Hacker & Thomale, *supra* note 70, at 20.

¹⁷⁵ For example, the ICO of EOS. *See* EOS Mainnet Swap Update, BINANCE, (June 1, 2018), <http://perma.cc/5DT2-3DTY> (Point 19: “EOS Tokens will become fixed (non-transferable) on the Ethereum blockchain within 23 hours after the end of the final EOS Token distribution period ...”).

¹⁷⁶ Hacker & Thomale, *supra* note 70, at 20–21.

However, in some ICOs these technical restrictions are just temporary. Sometimes the transfer restriction is removed after a predefined time,¹⁷⁷ making the tokens transferable. Thus, from a structural perspective the token would not be a transferable security during the initial offering (in the primary market), but would transform into a transferable security later in the secondary market. It is our view that, in these circumstances, the requirement of transferability should be considered as being fulfilled from the beginning,¹⁷⁸ which means from the time of the initial offering. It is not sensible to classify a token as a transferable security at one point in time during its lifecycle (such as when it is traded after the lock has been removed) while negating its classification as a transferable security at another point (such as when it is initially offered to the public). It is obvious that E.U. lawmakers wanted to apply a uniform definition of “transferable securities” throughout the E.U. financial markets regulation landscape. This is why, as outlined in Section III, Subsection B, regulatory cornerstones such as the Market Abuse Regulation and the Prospectus Regulation also use the definition given in Article 4 MiFiD2.

There is also the problem of cherry picking. It would go against the fundamental principles of investor protection¹⁷⁹ if issuers could escape an unpopular aspect of financial markets regulation (for example, the prospectus requirement), but reap the rewards of having a fungible token that is more attractive to prospective investors. Investors could also buy tokens using insider knowledge. If the lockup is removed after the initial offering (thereby turning the token into a “transferable security”) the ban on insider trading would be ineffective because the respective trade would have taken place when the token was not a transferable security and thus was beyond the scope of insider trading regulation. Allowing such a technical bypass is unacceptable and opens a massive loophole in E.U. financial markets regulation. If issuers want to remain outside its scope of application, they need to ensure that none of its regulatory aspects will apply. The only way to do so is to eliminate tradability of the token permanently. Thus, tokens are “transferable” pursuant to Article 4(1) MiFiD2 from the beginning if transferability is made possible or a lockup is removed after the ICO.

¹⁷⁷ See, for example, FRIENDZ, WHITEPAPER 47, http://www.friendz.io/file/whitepaper_icofriendz.pdf.

¹⁷⁸ The nature of the blockchain dictates that temporary or permanent lockups are set out in the code of the blockchain from the very start. In other words, the nature of the lockup is clear from the outset in that the nature of the token cannot be changed later.

¹⁷⁹ For example, MiFiD2 highlights the need to improve and maintain investor protection in Recitals 70 and 86.

2. Capital Markets

The term “capital markets” is not defined under E.U. law either. However, the European Commission applies a broad interpretation which includes “all contexts where buying and selling interests in securities meet.”¹⁸⁰ This flexible approach allows financial markets laws to be applied to new market structures not anticipated when the regulation was drafted. However, this interpretation of “capital markets” is still incomplete because it uses “securities” as part of the definition, which again leads to the questions about what “securities” exactly are in this context. Unsurprisingly, commentators also typically stay vague on the issue because in the traditional stock market environment it is clear that the units typically traded on an exchange (stocks, bonds, etc.) are securities. However, the fact that tokens are not yet traded on traditional exchanges raises the question of where to draw the line between capital markets and other markets.

It is our view that the essential issue is what market participants and stakeholders consider to be a “capital market.” Capital markets are commonly understood to be part of the financial markets.¹⁸¹ In capital markets, buyers and sellers engage in the trade of financial securities such as stocks and bonds.¹⁸² For example, the market types set out in Article 4(1) MiFiD2¹⁸³ are capital markets. Generally, one main difference between capital markets and other parts of the financial markets,¹⁸⁴ or markets other than financial markets, is the ongoing relationship between the issuer and the investor based on the traded instrument.¹⁸⁵ Stocks provide investors with membership rights in the respective company (typically voting and profit participation), while bonds create an ongoing flow of funds from the issuer to the investor. In both cases the

¹⁸⁰ EUROPEAN COMM'N, YOUR QUESTIONS ON MiFID 46 (Oct. 31, 2008), <http://perma.cc/7UDR-WJ59>.

¹⁸¹ See, for example, Kristina Zucchi, *Financial Markets: Capital vs. Money Markets*, INVESTOPEDIA (Jan. 2, 2018), <http://perma.cc/4CSF-WUU7>.

¹⁸² See, for example, *Definition of 'Capital Market'*, THE ECONOMIC TIMES, <http://perma.cc/Y3N5-NJZM>.

¹⁸³ These are regulated markets (art. 4(1)(21)), multilateral trading facilities (art. 4(1)(22)) and organized trading facilities (art. 4(1)(23)). See MiFiD2, *supra* note 123.

¹⁸⁴ For example, money markets or commodities markets.

¹⁸⁵ A special case that this Article will not discuss in detail is an ICO of investment tokens without an issuer, which means that the ICO was organized in a decentralized way. The DAO token sale was one example of this type of ICO. For further discussion, see Laila Metjahic, *Deconstructing the DAO: The Need for Legal Recognition and the Application of Securities Laws to Decentralized Organizations*, 39 CARDOZO L. REV. 1533 (2018).

investment is based on the expectation of profits.¹⁸⁶ Profits should be interpreted widely to include dividends and periodic payments.¹⁸⁷ As a result, a token granting a flow of monies (either in a fixed rate or depending on the company's profits) from the issuer to the investor is potentially negotiable on the *capital* markets. If the token does not grant a flow of monies, but does grant other rights that are typically linked to the status of a shareholder (in particular, voting rights), it would also be considered a transferable security. In contrast, a token cannot be a "transferable security" if it does not provide any such membership rights, comparable rights, or monetary streams. Therefore, if the possible return on investment can only stem from an increased value of the tokens in the secondary market, the respective token is not an investment token and *a priori* cannot be considered a "transferable security."

As a result, hybrid tokens with some sort of investment aspect would be negotiable on the capital markets. In contrast, pure cryptocurrency tokens would not be classified as transferable securities as their structure is decentralized in most cases; there is no ongoing relationship between issuer and "investor." If a pure utility token grants benefits (for example, vouchers for particular services offered by the issuer), its focus is on consumption and not investment.¹⁸⁸ Thus, it would not be a "transferable security," even if it were transferable¹⁸⁹ and potentially negotiable.

This approach is in line with the objectives of E.U. financial markets regulation, which is, *inter alia*, to protect investors (and thus investment decisions) and not consumers (and thus consumption decisions).¹⁹⁰ The distinction is similar to the investment/utility token dichotomy as described in Section II of this Article. To a certain extent it also resembles the *Howey* test that was discussed in Section III of this Article. However, the approaches differ in certain respects. The *Howey* test is conclusive regarding the existence of an "investment contract" and therefore the application of U.S. investment laws.

¹⁸⁶ The fact that some investors may have objectives other than profit (for example, gaining influence in a company) does not change the fact that securities regulation rests upon the assumption that the typical investor is seeking profits.

¹⁸⁷ The U.S. Supreme Court goes one step further and even includes the "increased value of the investment" in the definition of profits. *SEC v. Edwards*, 540 U.S. 389, 394 (2004).

¹⁸⁸ Hacker & Thomale, *supra* note 70, at 29; Zickgraf, *supra* note 73, at 304.

¹⁸⁹ Some commentators seem to consider it sufficient for the classification as an "investment token" if the token is tradeable in a secondary market; *see, for example*, Hacker & Thomale, *supra* note 70 at 13 ("...even tokens that mainly aspire to serve as a utility token typically will have an investment component as tokens can be traded, and hence sold at a profit, at token exchanges (secondary markets) subsequent to the ICO."). This theory is not convincing because it overstretches the idea of "investment"—the mere possibility of buying and selling something, even in a structured marketplace, does not make it an "investment."

¹⁹⁰ Klöhn et al., *supra* note 68, at 101.

Using the typical characteristics of securities as a constituent element of “capital markets” under Article 4(1) MiFiD2 merely eliminates the applications of E.U. financial markets laws to tokens that have clearly nothing to do with the capital markets.

We are aware that under this approach some tokens that are commonly described as utility tokens would fall under the scope of E.U. financial markets regulation. For example, the conveyance of voting rights is sometimes provided as an example of utility tokens although it is a classical membership right.¹⁹¹ However, this divergence is not surprising because the classifications of tokens have evolved in the markets, whereas the MiFiD2 definitions follow a black-letter approach to financial markets regulation. It is a common phenomenon in fintech regulation that common understandings and legal definitions are diverging.

Furthermore, tokens that do not confer profit participation or voting rights do not fulfill the definition of “transferable securities,” although investors are betting on an increase in value of their investment. However, the fact that the transferable security prerequisites are not met does not mean that those investments are not regulated at all. Such tokens might be subject to other existing regulatory regimes (for example, payment system regulation, anti-money laundering regulations, and crypto exchange rules). It is also possible that the increasing importance of currency tokens will trigger new forms of regulation, such as new specific licensing requirements for trading venues. However, this is not a question of securities regulation but of currency and payment regulation.

3. Negotiability

Pursuant to Article 4(1)(44) MiFiD2, tokens need to be negotiable to be considered “transferable securities.”¹⁹² In contrast to “transferability,” which refers to the mere possibility of being traded, a unit is negotiable if its format allows its sale or purchase in a structured market setting (such as in the capital markets).¹⁹³ This can also be referred to as the “ease” of the transfer. Strictly speaking, the concept of negotiability already contains the notion that the instrument is transferable.¹⁹⁴

¹⁹¹ See, for example, Josiah Wilmoth, *The Difference Between Utility Tokens and Equity Tokens*, STRATEGIC COIN, <http://perma.cc/BV2S-X4TK>.

¹⁹² Sometimes also referred to as “tradeable” or “fungible.”

¹⁹³ Fuchs, *supra* note 170, at § 2 ¶ 16; Roth, *supra* note 171, at § 2 ¶ 27; Assmann, *supra* note 170, at § 2 ¶ 8 et seq.; Christoph Kumpan in *KAPITALMARKTRECHTS-KOMMENTAR* § 2 WpHG ¶ 9 (Eberhard Schwark & Daniel Zimmer eds., 4th ed. 2010).

¹⁹⁴ Assmann, *supra* note 170, at § 2 ¶ 10; Fuchs, *supra* note 170, at § 2 ¶ 16.

Tokens can typically be considered “negotiable.”¹⁹⁵ The wording (“negotiable” instead of “negotiated”) demonstrates that the tokens do not need to be traded on an exchange. “If the securities in question are of a kind that is capable of being traded” on the trading facilities regulated under MiFiD2, it is “a conclusive indication that they are transferable securities.”¹⁹⁶ As of publication, tokens are not traded on classical stock exchanges, rather they are traded on various crypto exchanges.¹⁹⁷ Any investment token listed on a crypto exchange is a negotiable security. The same applies to non-traded tokens with characteristics similar to those that are already traded because it is sufficient that such units could be traded in the future.¹⁹⁸ In other words, any token would be considered negotiable unless it is clear from the outset that it will never be traded on a crypto exchange or a similar facility. It is hard to imagine why a token could not be traded in such a venue. This wide understanding is in line with the view taken by the European Commission regarding classical securities. It stated that even if the respective units are not capable of being traded in multilateral systems, this is not conclusive evidence that they are not negotiable.¹⁹⁹

Some commentators argue that the respective units need to allow for an increased level of reliability and security regarding the transaction.²⁰⁰ In particular, market participants need to be sure that third parties cannot assert rights after the securities have been transferred.²⁰¹ This is a consequence of the anonymized trading in the capital markets. In classical securities settings, this refers to the possibility to acquire the items in good faith.²⁰² The necessary

¹⁹⁵ Hacker & Thomale, *supra* note 70, at 22.

¹⁹⁶ EUROPEAN COMM’N, *supra* note 180, at 46.

¹⁹⁷ For examples of a crypto exchange, see BINANCE, <http://perma.cc/G4S3-LP59>; IDEX, <http://idex.market/>.

¹⁹⁸ Fuchs, *supra* note 170, at § 2 ¶ 17; Assmann, *supra* note 170, at § 2 ¶ 9; *see also* Kumpan, *supra* note 193, at § 2 WpHG ¶ 9; Roth, *supra* note 171, at § 2 ¶ 36.

¹⁹⁹ EUROPEAN COMM’N, *supra* note 180, at 46.

²⁰⁰ Kumpan, *supra* note 193, at § 2 WpHG ¶ 9; *cf.* Fuchs, *supra* note 170, at § 2 ¶ 18; *contra* von Kopp-Colomb & Schneider, *supra* note 171, at § 2 WpHG ¶ 9; Assmann, *supra* note 170, at § 2 ¶ 17; *cf. Second Report on EU Clearing and Settlement Arrangements*, THE GIOVANNINI GROUP, at 15–16 (Apr. 2003), <http://perma.cc/S85N-D5DP>.

²⁰¹ Kumpan, *supra* note 193, at § 2 WpHG ¶ 9.

²⁰² Fuchs, *supra* note 170, at § 2 ¶ 16. The term “good faith” (*bona fide*) refers to a transaction where a person acquires a movable good from someone he erroneously considers to be entitled to transfer ownership to him. In most civil law jurisdictions, the acquirer would nevertheless become the owner unless the movable good had been stolen or lost. For overview, see Arthur F. Salomons, *Good Faith Acquisition of Movables*, in *TOWARDS A EUROPEAN CIVIL CODE 1065* (Arthur S. Hartkamp et al. eds., 4th ed. 2010).

protection can also be provided by equivalent means.²⁰³ Nevertheless, even if such an (unwritten) reliability requirement were necessary, it would not be an issue because tokens are based on blockchain technology.²⁰⁴ As outlined in Section II of this Article, all transactions are recorded in the blockchain. Once the recording has taken place, it is virtually impossible to change the respective data.²⁰⁵ The result is an extraordinarily high level of reliability and security that arguably exceeds the level of protection granted by the rules of acquisition in good faith.

4. Standardization

Negotiability requires the respective units to be standardized.²⁰⁶ This flows from the concept of capital markets transactions, which are executed anonymously and require the respective units to be identifiable and enumerable.²⁰⁷ Transactions need to be possible without further negotiations between the parties.²⁰⁸ The definition in Article 4(1)(44) MiFiD2, which refers to “classes of securities,” also affirms this understanding.²⁰⁹

Standardization does not require that all units available in the markets share the same characteristics. In practice, other securities such as stocks come in different varieties (ordinary stocks, preferred stocks, bearer stocks, registered shares, etc.).²¹⁰ Similarly, there are various types of tokens that have varying characteristics. However, this does not mean that tokens are not “standardized” pursuant to Article 4(1)(44) MiFiD2. It is not necessary that all tokens from different issuers are standardized, which means that certain “typical” tokens are circulating in the markets.²¹¹ Instead, the standardization requirement seeks to exclude securities that have been customized for particular customers,²¹² as this would create uncertainties in the market environment. If all tokens in a particular ICO are of the same kind, or the ICO comprises different classes of tokens that

²⁰³ Hacker & Thomale, *supra* note 70, at 22; Kumpan, *supra* note 193, at § 2 WpHG ¶ 9; Fuchs, *supra* note 170, at § 2 ¶ 16 (stating that in addition to the possibility of an acquisition in good faith, the necessary protection can be granted by further statutory provisions).

²⁰⁴ Hacker & Thomale, *supra* note 70, at 22.

²⁰⁵ See *supra* pp. 556–7.

²⁰⁶ See Rüdiger Veil, *Financial Instruments, in EUROPEAN CAPITAL MARKETS LAW*, § 8 ¶ 5 (Rüdiger Veil ed., 2d ed. 2017).

²⁰⁷ Kumpan, *supra* note 193, at § 2 WpHG ¶ 7; Roth, *supra* note 171, at § 2 ¶ 24; Zickgraf, *supra* note 73, at 299.

²⁰⁸ Roth, *supra* note 171, at § 2 ¶ 29.

²⁰⁹ Kumpan, *supra* note 193, at § 2 WpHG ¶ 7.

²¹⁰ Cf. Hacker & Thomale, *supra* note 70, at 20.

²¹¹ Zickgraf, *supra* note 73, at 300.

²¹² Roth, *supra* note 171, at § 2 ¶ 24.

are clearly identifiable and therefore negotiable, the standardization requirement is met. This is typically the case in ICOs.

It is also irrelevant that tokens are sometimes purchased in increments (for example, 0.57 units). The reason is that the subscription interface often asks for the amount the subscriber is willing to invest, translating the investment amount into parts of a token. This is the same principle that is applied to the purchase of exchange traded funds (ETFs). However, “standardization” does not require the units in question to be traded in full.²¹³ Even if increments of a token are traded, they remain identifiable and thus standardized.

5. No Payment Instruments

According to Article 4(1)(44) MiFiD2, “payment instruments” are not transferable securities. Similar to “capital markets,” the term is not defined by MiFiD2²¹⁴ and needs to be interpreted according to the general understanding in the markets. The definition encompasses classical means of payment such as cash and checks.²¹⁵ It also applies to non-cash payment mediums such as debit or credit cards, credit transfers, direct debits, and e-money.²¹⁶ Currency tokens fall within this category because they are designed to function as a means of payment, which means that they are payment instruments and thus not transferable securities. They exhibit strong similarities to e-money,²¹⁷ which is classified as a payment instrument.²¹⁸ This view is in line with the famous *Hedqvist* decision in which the CJEU held that Bitcoins are contractual payment instruments.²¹⁹ U.S. Magistrate Judge Mazzant expressed a similar view in SEC litigation against a Ponzi scheme based on a Bitcoin operation.²²⁰ In contrast,

²¹³ This is also a consequence of the fact that no physical embodiment of the security (which would typically refer to full units) is required.

²¹⁴ The definition in Article 4(14) of Directive (EU) 2015/2366 (Second Payment Services Directive) referring to “personalised devices” cannot be applied because it is used in a non-capital markets context.

²¹⁵ Roth, *supra* note 171, at § 2 ¶ 41; Assmann, *supra* note 170, at § 2 ¶ 12.

²¹⁶ See *Payment Instruments*, EUROPEAN CENTRAL BANK, <http://perma.cc/YS4B-BKFJ>.

²¹⁷ *Id.*

²¹⁸ Hacker & Thomale, *supra* note 70, at 31.

²¹⁹ Case C-264/14, *Skatteverket v. David Hedqvist*, 2015 E.C.R. 718. In this case, a Swedish national wanted to offer a service enabling customers to change money into Bitcoin and vice versa. Traditional currency exchanges are exempt from value added tax under Article 135(1) of Directive 2006/112/EC (VAT Directive). Thus, the issue was whether Bitcoin could be considered equivalent to a legal tender within the meaning of the Directive. Although the CJEU affirmed the application of the exemption, it is unclear if this can also apply to securities regulation because the structure and purpose differs from tax law.

²²⁰ SEC v. Shavers, No. 4:13-CV-416, 2013 WL 4028182, at *2 (E.D. Tex. Aug. 6, 2013) (“It is clear that Bitcoin can be used as money”).

investment tokens and utility tokens are not payment instruments. Although they can be used as consideration (for example, in a barter agreement or as a replacement for a cash payment if agreed on by the parties), they are not designed to be a means of payment.

The issue is how hybrid tokens (in particular, tokens with investment and payment features) fit into the picture. It is our view that tokens can only be considered as a “payment instrument” if their sole or main purpose is to be used for payments.²²¹ This flows from the classification described in Section II of this Article. Currency tokens have been defined as decentralized and not carrying any inherent value. If a currency token combines payment functions with investment aspects that are not based only on rising rates or prices, it would not be classified as currency but an investment token. As a result, it would not be a payment instrument.

In any event, an interpretation of the legal framework irrespective of the token classification would reach the same conclusion for three reasons. First, the “payment instrument” rule is an exception to the general rule that units that are negotiable in the capital markets are transferable securities. An exception to a general rule needs to be applied cautiously, which means in ambiguous cases the general rule would apply. Thus, the statutory exemption for payment instruments would only apply in cases in which it is unambiguously clear that the token is exclusively used for payment purposes. For hybrid tokens this will hardly ever be the case. Second, our view aligns with the purpose of financial markets regulation. The definitions contained in Article 4 MiFiD2 apply to the whole E.U. financial markets regulation framework. Instruments of payment are primarily subject to E.U. banking and payment regulation. Both areas of law can apply simultaneously if a token exhibits characteristics of a security and a payment instrument. In particular, banking regulation would not make financial markets regulation inapplicable if a token can be used, or is supposed to be used, both as a payment instrument and a security. Third, a wide interpretation of the exception would open regulatory gaps and allow regulatory arbitrage. If adding some limited payment functionality would result in the inapplicability of Article 4(1)(44) MiFiD2, issuers would have a simple way of escaping financial markets regulation even if the token conveyed significant investor rights.

C. Comparability as an Unwritten Requirement?

Other commentators want to introduce another unwritten requirement into the definition of “transferable securities.”²²² They argue that Article 4(1)(44)

²²¹ Cf. Hacker & Thomale, *supra* note 70, at 35–36.

²²² Hacker & Thomale, *supra* note 70, at 24; cf. Fuchs, *supra* note 170, at § 2 ¶ 19.

MiFiD2 provides a non-exhaustive list of transferable securities (stocks, bonds, and respective call/put options). In particular, this list consists of examples which reflected E.U. lawmakers' idea of what type of securities would be regulated under MiFiD2. Accordingly, new types of securities would need to be functionally equivalent, or at least comparable, to the listed examples.²²³

The purpose of this approach is sensible. In theory, the wide ambit of the criterion "negotiability on the capital markets" could result in the application of securities laws to units that have little or nothing to do with the common understanding of securities. However, the legal technique behind the approach is unconvincing. The term "such as" in the definition of "transferable securities" in Article 4(1)(44) MiFiD2 suggests that the listed securities are mere examples. It is a plausible assumption that by listing these three forms of securities, E.U. lawmakers wanted to express what they considered to be typical manifestations of securities in the markets at the time of drafting the regulation. However, there is no indication that only comparable units can be classified as "transferable securities." In addition, it is unclear what level of comparability would be necessary.

Nevertheless, if the definition of "transferable securities" is applied correctly, there is no need for a comparability requirement. As discussed above, units must possess certain minimum investment features if they are capable of being traded in the "capital markets." This interpretation of the statutory definition draws a line between investment, utility, and cryptocurrency tokens. It does not inject an unwritten element into the definition, but allows a distinction based on the wording of the provision and the general understanding in the markets. It also avoids the tricky question as to what exactly is "comparable" to a stock or a bond. The applicable test is whether there is any investment feature embodied in the token.

D. Derivatives

The definition of "transferable securities" in Article 4(1)(44)(c) also includes "any other securities giving the right to acquire or sell any such transferable securities or giving rise to a cash settlement determined by reference to transferable securities, currencies, interest rates or yields, commodities or other indices or measures."²²⁴ The list of referenced units is extremely wide. The background is that with respect to derivative classification, it is not important that the relevant unit itself is a security. For example, a forward contract on oranges would also be a transferable security. As a consequence, derivatives on

²²³ *Id.*

²²⁴ MiFiD2, *supra* note 123.

tokens would be classified as “transferable securities” even if the token lacks investment features.

This interpretation coincides with the view taken by the FCA. Because a growing number of financial service providers offer cryptocurrency-related services, the FCA issued new guidance, stating that derivatives on cryptocurrencies (in particular, futures, options, and contracts for difference) may be financial instruments under the MiFiD2 framework.²²⁵ As a consequence, firms offering these derivatives would require authorization. Similarly, the French AMF concluded that cryptocurrencies are eligible underlying assets for derivatives because the list contained in Article 4(1)(44) MiFiD2 is a mere list of examples.²²⁶ European lawmakers have provided themselves leeway to expand the list of eligible underlying assets, and by referring to notions of an increasingly broader scope, this enables them to keep in step with innovation in the industry.²²⁷ The AMF also pointed out that market services regarding crypto derivatives would require authorization and that crypto derivatives are subject to the obligations set out in Regulation (EU) No. 648/2012 on OTC Derivatives, Central Counterparties and Trade Repositories (commonly referred to as the European Market Infrastructure Regulation, or EMIR), in particular the obligation to report transactions to a trade repository.²²⁸

E. Result

Tokens are transferable unless they have a permanent lockup function. They are negotiable unless there are elements that make listing at an exchange platform impossible. The blockchain technology allows secure transactions, which would be sufficient if an increased form of negotiability was necessary. The “capital markets” requirement limits the scope of the definition to tokens with some sort of investment function. However, the token does not need to be comparable to a stock or a bond. Tokens are countable and thus traded anonymously, making them sufficiently standardized. It is irrelevant if tokens have payment functionality. Only if its main or only function is payment would tokens fall out of the scope of the definition of “transferable securities.” In sum, most of the tokens that are commonly described as “investment tokens” would be considered as “transferable securities” pursuant to Article 4(1)(44) MiFiD2. The result is remarkably similar to the SEC’s approach using the *Howey* test. Thus, it is possible to reconcile the scope of application of U.S. and E.U.

²²⁵ FCA, *supra* note 134.

²²⁶ AMF, *supra* note 144, at 2–3.

²²⁷ *Id.*

²²⁸ *Id.* at 1.

securities laws. The only major difference is the classification of investment tokens that are not transferable due to a lockup. It remains to be seen whether the SEC will address this issue in the future.

V. CONCLUSION

In this Article, we reviewed the different approaches taken by regulators regarding the legal framework for ICOs in major financial markets. We submitted that harmonization between different jurisdictions is highly desirable because a race to the bottom and unregulated areas need to be avoided. A major obstacle could be that there are differences in the pivotal definitions for the application of securities laws. Most significantly, U.S. law refers to “investment contract,” while E.U. law focuses on “transferable securities.” Our analysis shows that only tokens that lack any form of investment component would not be classified as transferable securities under E.U. law. This demonstrates a high level of comparability between the E.U. and U.S. legal frameworks. This is desirable because it avoids diverging or even competing frameworks for ICOs in these areas. The only major difference could be the classification of tokens that are non-transferable due to a lockup and would thus not be “transferable securities” under E.U. law. The U.S. *Howey* test does not take into account transferability as a requirement for “investment contracts.” If the SEC addresses this issue in the future, even a full alignment of U.S. and E.U. law could be achieved. This would be a huge step towards harmonized ICO regulation.