JURISDICTION SHOPPING IN SECURITY TOKEN OFFERINGS: THE UNITED STATES VS. THE EUROPEAN UNION

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ABSTRACT

This Thesis compares the EU and the US regulation of Security Token Offerings (STOs). STOs are a relatively new regulatory issue, but both the US and the EU have already reacted to it by, e.g., taking actions against non-compliant issuers in case of the US and developing new legal instruments and/or amending the old ones in case of the EU. The US government has introduced many bills precisely on crypto regulation as, for instance, the Lummis-Gillibrand Responsible Financial Innovation Act. However, none of those that would be relevant for STOs are binding yet, so regulators apply the existing regulations and case-law. As for now, the US is known for its regulation-by-enforcement approach as employed by the Securities and Exchange Commission (SEC).

The EU followed a different path: the European Commission proposed three Regulations and one Directive covering and relating to crypto assets, although there are not many known cases brought by National Competent Authorities (NCAs) against issuers of security tokens. Notably, MiCA (not in force yet) provides that some crypto assets can qualify as financial instruments, while DLT Pilot Regime has officially included distributed ledger technology (DLT) financial instruments into the scope of MiFID II 'financial instrument' definition.

The approach on STOs regulation differs between these jurisdictions not only formally but also in substance as they impose different requirements on security tokens' issuers. Issuers willing to lawfully market their security tokens in a large and developed market, such as the US or the EU, should understand which jurisdiction is more favorable specifically for them. Therefore, the aim of this Thesis is to determine a more favorable jurisdiction from an issuer's perspective, i.e., which jurisdiction would be preferred by a company willing to conduct an STO based on its needs. The criteria for comparative assessment of the jurisdictions are the following: 1) legal

status of STOs (are they legitimate); 2) requirements for conducting STOs; 3) the restrictiveness of applicable limitations.

The main research question therefore is which is the preferrable jurisdiction for conducting an STO considering the legal status, requirements, and limitations in the US and the EU?

For answering this question, the following issues must be addressed: definition of security tokens; laws and regulations applicable to STOs; case law on STOs, and the practice in STOs' field in both jurisdictions.

The Thesis will address the US's federal law and the EU's supranational law such as Regulations and/or Directives, since these are the two of the world's major financial markets. Additionally, since securities laws and regulations in the EU are not harmonized to the full extent, the Thesis will cover the most crypto-friendly jurisdictions in this region, such as Luxembourg, Malta, and Estonia.

Moreover, the Thesis incorporates the conducted interviews and consultations with experts and professionals in the field of security tokens regulation.

1. INTRODUCTION

1.1. Topicality

The global Security Token Offering (STO) market has grown significantly since STOs first emerged in 2017[1] as a response to unregulated and risky Initial Coin Offerings (ICOs), which were a popular tool for raising finance by companies since 2013.[2] According to a study by Arca Labs and Coalition Greenwich, 77% of the interviewed capital market participants believe that most securities will be digitized[3] and settled on a blockchain in the next five-ten years.[4] While the study could be theoretically biased, since Arca is an industry participant (asset management firm investing and innovating in digital assets), it was assisted by an independent provider of analytics and insights to the financial services industry, which reduces the risk of bias. On the other hand, some European experts expressed a somewhat skeptical view on the implementation of distributed ledger technology (DLT) into securities trading in the next few years.[5]

[1] PwC, '4th ICO / STO Report' (2019) 6 <https://cryptovalley.swiss/wp-content/uploads/ch-20190308-strategyand-ico-sto-report-q1-2019.pdf> accessed 25 January 2023.

[2] *See* Lennart Ante and Ingo Fiedler, 'Cheap Signals in Security Token Offerings (STOs)' [2020] 4(4) QFE 608, 609 <doi: 10.3934/QFE.2020028>; Lennart Ante, 'Cryptocurrency, Blockchain and Crime' in Killian J McCarthy (ed), *The Money Laundering Market: Regulating the criminal economy* (Agenda Publishing 2018) 171–198; Michael Mendelson, 'From Initial Coin Offerings to Security Tokens: A U.S. Federal Securities Law Analysis' [2019] 22 Stan Tech L Rev 52, 63 <https://heinonline.org/HOL/Page?handle=hein.journals/stantlr22&div=4> accessed 25 January 2023.

[3] Digitization refers to the act of making *information* digital, while digitalization refers to *processes* – Kihara Kimachia, 'What Is Digitization vs Digitalization vs Digital Transformation?' (*Channel Insider*, 26 September 2022) <https://www.channelinsider.com/business-management/digitization-vs-digitalization/#:~:text=While%20digitization%20refers%20to%20the,whereas%20digitalization%20is%20for%20processes.> accessed 11 June 2023.

[4] Arca Labs and Coalition Greenwich, 'The Future of Securities: A Digital Asset Securities Study' (January 2022), <https://fs.hubspotusercontent00.net/hubfs/4536350/Arca%20The%20Future%20of%20Securities%20Study.pdf> accessed 31 March 2023.

[5] Professor João Santos, private interview (20 March 2023); Andreas Weixelbaumer, visit to Vienna Stock Exchange (17 April 2023); *see also* Jemima Kelly, 'Blockchain: disillusionment descends on financial services' (Financial Times, 24 September 2019) <https://www.ft.com/content/93140eac-9cbb-11e9-9c06-a4640c9feebb> accessed 18 April 2023; Izabella Kaminska, 'Blockchain officially confirmed as slower and more expensive' (Financial Times, 29 May 2019) <https://www.ft.com/content/fe5b17e1-4040-3249-b473-f3c998c67de9> accessed 18 April 2023.

Notwithstanding this debate, STO market continues to develop as many companies introduced services of tokenization of assets and other assistance with STOs[6] as well as a number of 'big players' such as, e.g., Hamilton Lane in the US[7] and Société Générale in the EU[8], issued their security tokens. Overall, the STO market is growing as well as the attention to its regulation.

STO is a blockchain-based 'sibling' of Initial Public Offering (IPO), since for a token to qualify as a security/financial instrument, it must fall under the definition[9] of security provided in a particular jurisdiction.[10] Thus, in theory (and in practice, as will be seen later), STOs should be regulated in accordance with the same laws as IPOs of such conventional securities as shares or as issuance of bonds and similar issuances of conventional securities. However, the EU and the US follow slightly different approaches in STOs' regulation. Not only do these jurisdictions have different financial and securities laws and regulations, but they also have different approaches to defining securities or financial instruments, which impacts the scope of token sales that would qualify as STOs. Moreover, old securities regulations are not fully suitable for application to new technological developments such as security tokens. Thus, regulators adopt new laws or amend old ones, or case law provides for specifics of applying old laws, or gaps are filled in practice by STO organizers themselves; but both jurisdictions have their own differing solutions.

[6] *E.g.*, Black Manta Capital Partners, STOKR, Stobox, etc. in the EU and Securitize, Pixelplex, Manhattan Street Capital, etc. in the US.
[7] Hamilton Lane, 'Hamilton Lane and Securitize to Tokenize Funds, Expanding Access to Private Markets for a Broader Set of Investors' (5 October 2022) <https://www.hamiltonlane.com/en-us/news/hamilton-lane-securitize-tokenize-funds> accessed 31 March 2023.
[8] Société Générale, 'Societe Generale Issued the First Covered Bond as a Security Token on a Public Blockchain (23 April 2019) <https://www.societegenerale.com/en/news/newsroom/societe-generale-issued-first-covered-bond-security-token-public-blockchain> accessed 31 March 2023.
[9] 'Definition of security' hereinafter means not only definitions contained in provisions of law but also tests for determining what is a security and broader approaches existing in a particular jurisdiction.
[10] *See, e.g.*, Thomas Lambert et al., 'Security token offerings' (2021) 59 Small Bus Econ 299, 302-303 <https://doi.org/10.1007/s11187-021-00539-9> accessed 11 April 2023; Philipp Maume, 'Initial Coin offerings and EU Prospectus disclosure' (2020) 31(2) EBLR 185, 193-196 <https://doi.org/10.54648/eulr2020008> accessed 15 April 2023.

The US does not have any sector-specific regulation on crypto assets yet, but the Securities and Exchange Commission (SEC) actively applies securities regulation to the crypto asset offerings and brings enforcement actions against issuers.[11] In the EU, in addition to the securities regulation, DLT Pilot Regime[12] and MiCA[13] are the two Regulations of utmost importance within the framework of STOs. The former extends the scope of MiFID II definition of financial instrument to DLT financial instruments[14] as well as provides DLT trading venues with an opportunity to apply for exemptions from some MiFID II requirements. MiCA (not in force yet) provides rules for the offering of crypto assets, other than stablecoins or e-money (payment) tokens and suggests that some crypto assets may qualify as financial instruments under MiFID II.

Understanding the differences between the US and the EU regulation is crucial for companies interested in conducting an STO in order to make an informed decision regarding the place of a potential STO. This research can also help yet unincorporated companies, whose plans include raising capital through issuance of an STO, to choose the more favorable jurisdiction. Nevertheless, regulators could learn some lessons from other countries' practice in order to make their regulation of STOs more favorable and to attract more investment.

[11] *See* SEC, 'Cyber enforcement actions' (2023) <https://www.sec.gov/spotlight/cybersecurity-enforcement-actions> accessed 11 April 2023.
[12] Regulation (EU) 2022/858 of the European Parliament and of the Council of 30 May 2022 on a pilot regime for market infrastructures based on distributed ledger technology, and amending Regulations (EU) No 600/2014 and (EU) No 909/2014 and Directive 2014/65/EU [2022] OJ L 151.
[13] European Parliament legislative resolution of 20 April 2023 on the proposal for a regulation of the European Parliament and of the Council on Markets in Crypto-assets and amending Directive (EU) 2019/1937 <https://www.europarl.europa.eu/doceo/document/TA-9-2023-0117_EN.html#title2> accessed 14 June 2023.
[14] Art. 4(1)(15) of the Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU (recast) (consolidated text) [2014] OJ L 173.

1.2. The Jurisdictions Covered

The Thesis focuses on the US and the EU regulation of STOs. These jurisdictions were chosen due to their importance on the scale of global financial markets and their pioneering role in developing crypto regulation.

The largest stock exchange operators by market capitalization of listed companies are located in the US, China, and Europe.[15] Moreover, both the US and Europe have high values of venture capital funding raised in the past years[16], which suggests that companies there are actively attracting finance and are possibly searching for alternative fundraising tools.

As regards the pioneering role of these jurisdictions, the EU was one of the first to propose a comprehensive regulation of crypto market and provide a regulatory sandbox for market participants[17], while the US's SEC is one of the most (if not the most) active regulators taking enforcement actions against issuers of crypto assets.[18]

However, it must be noted that both the US and the EU are regulating crypto market quite heavily, and hence these jurisdictions might be less attractive to issuers that wish to avoid strict requirements and high regulatory costs. Still, understanding and comparing the regulatory requirements of these two jurisdictions is important for issuers if they wish to market their

[15] WFE, 'Largest stock exchange operators worldwide as of October 2022, by market capitalization of listed companies (in trillion U.S. dollars)' Chart (31 January 2023), in *Statista* <https://www.statista.com/statistics/270126/largest-stock-exchange-operators-by-market-capitalization-of-listed-companies/> accessed 14 April 2023.

[16] *See* KPMG, 'Value of venture capital funds raised in Europe from the 1st quarter 2014 to 2nd quarter 2022 (in billion U.S. dollars)' Chart (20 July 2022), in *Statista* <https://www.statista.com/statistics/415712/venture-capital-fundraising-value-europe/> accessed 14 April 2023; NVCA, 'Venture capital fundraising in the United States from 2007 to 2022 (in billion U.S. dollars)' Chart (20 March 2023), in *Statista* <https://www.statista.com/statistics/280260/venture-capital-fund-raising-by-holding-companies-in-the-usa/> accessed 14 April 2023.

[17] *See* European Commission, 'Digital Finance Package' (24 September 2020) <https://finance.ec.europa.eu/publications/digital-finance-package_en> accessed 14 April 2023.

[18] Research on the Internet did not result in finding any lawsuits initiated by capital markets and securities regulators except of the US.

security tokens in a country or region with good economy, large population, and developed capital markets, without risking fines and enforcement actions for non-compliance.

For the purposes of this Thesis, the US federal securities regulations and the EU's supranational financial and capital markets law, such as Regulations and Directives, are reviewed. However, securities laws and regulations are not harmonized to the full extent across the EU, therefore, additional focus is placed on the selected most crypto-friendly European jurisdictions: Luxembourg, Malta, and Estonia.

1.3. Limitations and Research Methods

The number of publicly accessible reported cases in the EU is lower compared to the US. Such lack of case law made it more difficult to understand how the relevant law applies to issuers of security tokens in practice, which means that for them it might be also not clear enough. It was also a hurdle, that some of the US cases are still pending, hence not all relating documents are publicly available as of yet. Therefore, this Thesis contains references to some news articles updating readers on the case rather than only case law.

Doctrinal legal research methodology is used for definitional purposes as well as to describe and analyze the US and the EU securities laws and regulations. Additionally, this also includes analysis of available case law. Considering the innovative and heavy impact of the topic's technological aspect, the Thesis assesses positive law with statutes, regulations and additionally cases serving as the main sources. Studies on STOs are analyzed in addition to the court cases to better identify the implications of pertinent laws. Moreover, besides books and law review articles, such soft law instruments are resorted to as the opinions, guidelines, and reports of

National Competent Authorities (NCAs)[19], to substantiate some of the arguments and enhance theoretical part.

Comparative legal research methodology is resorted to for comparing the regulation of STOs in the US and the EU, and further in three EU jurisdiction: Luxembourg, Malta, and Estonia. The reason for the use of this methodology is that it serves the aim to determine best practices and solutions as well as helps to identify a more suitable jurisdiction for an STO. Moreover, it highlights the gaps and downsides in both jurisdictions.

1.4. Literature review

The technological aspects of security tokens, as well as digital and decentralized finance in general, are well explained in *The Emerald Handbook on Cryptoassets: Investment Opportunities and Challenges*.[20] In their paper[21], Ante and Fiedler discuss signaling theory within the context of STO and provide some insights on its marketing. Though for the purposes of this Thesis, the most important is that they provide an informative summary of the comparison of STOs to ICOs and IPOs and other background information such as historical data, some quantitative data and highlights of some benefits of STOs. However, these works are not written by lawyers and touch upon the regulation of STOs only superficially.

Mendelson's article[22] is a notable piece on the application of the US regulation to token offerings, which specifically reviews the post-DAO Report environment. However, this law

[19] *E.g.*, SEC, SEC Release No. 81207, 'Report of investigation pursuant to Section 21(a) of the Securities Exchange Act of 1934: The DAO' (25 July 2017) <https://www.sec.gov/litigation/investreport/34-81207.pdf> accessed 14 April 2023; Finantsinspektsioon (EFSA), 'Security token' (17 November 2022) <https://www.fi.ee/en/finantsinspektsioon/innovation-hub/security-token> accessed 14 April 2023; Malta Financial Services Authority (MFSA), 'Financial Instrument Test Guidelines' <https://www.mfsa.mt/wp-content/uploads/2019/05/VFAG_FITest_1.02.pdf> accessed 14 April 2023.
[20] H Kent Baker and others (eds), *The Emerald Handbook on Cryptoassets: Investment Opportunities and Challenges* (Emerald Publishing Limited 2023).
[21] Ante and Fiedler (n 2).
[22] Mendelson (n 2).

review article is already outdated as it is of 2019 and it does not introduce the concept of STOs. There is also a novel article that discusses a 'turf war' between the SEC and the Commodity Futures Trading Commission (CFTC) that explains the scope of both regulators' competence and whether and when crypto assets qualify as commodities or securities.[23] The article provides various insights on the US regulation of crypto assets but does not touch upon the EU.

The book by Veil[24] is pivotal for this research, since it provides all the relevant information about EU financial and securities laws and their interpretation and application. However, articles by European researchers[25] are also crucial for understanding the nuances of securities regulation's application to STOs. Similarly, Coffee's et al. book[26] provides cases and materials that are necessary to understand the US securities regulation and is arguably the most important source explaining US definition of security. While 'European' books do not in any way discuss STOs, Coffee et al. added a small subsection on tokens and other digital assets into the section "What is a 'Security'?", but it contains only two excerpts (from the DAO Report and the letter on in-game currency) without any analysis on behalf of the authors and does not discuss the specifics of securities regulation's application to such tokens.[27]

Overall, a proper book on STOs regulation has not been written by the lawyers yet, but the topic has definitely attracted legal professionals' attention. It is evident, i.a., from the increasing number of theses written by law students.[28]

[23] Taylor Anne Moffett, 'CFTC & SEC: The Wild West of Cryptocurrency Regulation' (2023) 57 U Rich L Rev 713.
[24] Rüdiger Veil (ed), *European Capital Markets Law* (2nd edn, Hart Publishing 2017).
[25] *E.g.*, Maume (n 10); Dirk A Zetzsche et al., 'The Markets in Crypto-Assets Regulation (MiCA) and the EU Digital Finance Strategy' (2021) 16(2) CMLJ 203.
[26] John C. Coffee, Jr. et al., *Securities regulation: cases and materials* (14th ed., Thomson Reuters/Foundation Press 2021).
[27] ibid at 356-366.
[28] *See, e.g.*, Thijs Maas, 'Initial coin offerings: when are tokens securities in the EU and US?: a comparative analysis on the application of US and EU securities laws to initial coin offerings (ICOs)' (Tilburg University, Master Thesis 2019) <http://arno.uvt.nl/show.cgi?fid=149356> accessed 25 January 2023; Dmitrijs Dikanskis,

1.5. The Roadmap to the Thesis

This Thesis consists of two chapters. The first chapter explains the concept of STO and discusses its main advantages over IPO and other conventional securities offerings in order to make it clearer for businesses whether STO suits their goals. Additionally, the definition of security tokens as such as well as definitions of securities present in both jurisdictions are provided and discussed to determine which crypto assets would qualify there as securities.

The second chapter compares three aspects of STO regulation in the US and the EU: legal status, requirements, and limitations. A separate section is devoted to each aspect/criterion as it allows author to *analytically* compare different STO regulations without unnecessary repetitions. Final part of the Thesis is Conclusion which summarizes main findings and provides answers to the research questions posed and recommendations for further research.

'Blockchain-based Tokens Issuance under the EU Framework: is it underdeveloped?' (Riga Graduate School of Law, Master Thesis 2020); Reinis Sietiņš, 'Security Token Offering in EU: applicable law' (Riga Graduate School of Law, Master Thesis 2019).

2. STO: WHAT KIND OF 'BEAST' IS THAT?

This Chapter is devoted to theoretical background. It is necessary to understand the concept of STO in general [2.1.] and to define security tokens in order to know the scope of STOs in the US and the EU [2.2.]. Moreover, it can be relevant to compare STOs with IPOs in order to highlight the differences between the two as well as potential benefits of STOs [2.3]. However, such comparison is based purely on outstanding research and literature and will be briefly reassessed by the author after the regulation analysis.

2.1. The Concept of STO

2.1.1. General background

In the past decade, startups and small and medium-scale enterprises (SMEs) found and resorted to a new way of raising the capital – ICOs.[29] This allowed companies to attract a lot of investors, while incurring much less expenses due to this activity being unregulated.[30] The subjects of such 'offerings' were mostly the so-called utility tokens which in some way resemble products offered by the company within the course of crowdfunding.[31] To be more precise, utility tokens provide its holders an access to a product or service of the issuer (usually provided via blockchain or another ecosystem) and sometimes also governance rights.[32]

[29] Ante and Fiedler (n 2) 609-610; *see also* Paul P Momtaz, 'Security Tokens' in Baker and others (eds) (n 20) 61-62.
[30] *See, e.g.*, Ante and Fiedler ibid 610-611.
[31] ibid 611.
[32] *See* Thomas Bourveau et al., 'The Role of Disclosure and Information Intermediaries in an Unregulated Capital Market: Evidence from Initial Coin Offerings' (2022) 60(1) JAR 129, 130 and 135; Zetzsche et al. (n 25) 206.

However, such source of financing was not suitable for all types of firms and, moreover, ICOs relatively quickly became associated with fraud, theft and other illegal activities.[33]

STOs appeared as a response to failure and bad reputation of ICOs. While ICOs were similar to crowdfunding, STOs in essence resemble IPOs, bond and other securities offerings. It is a source of financing for firms, where they offer to investors their crypto assets – security tokens. Such tokens represent securities or financial instruments, as defined by the relevant jurisdiction[34], and can be categorized as follows: equity, debt, fund, income-share, and other.[35]

When the token falls within the definition of security or financial instrument, the offer must be compliant with relevant securities laws.[36] The research outstanding and the EU legislation on crypto (yet in the development stage) indicate that in the EU security tokens shall be treated as financial instruments and, therefore, STOs must comply with financial and capital market laws similarly as IPOs.[37] In the US the necessity of STOs' compliance with securities laws and regulations is evident mostly from the extensive list of cases initiated by the Securities and Exchange Commission (SEC). Since 2013, the SEC has brought around 80 cases related to violations of securities laws and regulations, and the number of lawsuits per year only increases over time.[38] Moreover, the SEC's DAO Report, a landmark report where the SEC characterized crypto assets as securities, as well as some public speeches at industry events[39] provide a valuable guidance to the issuers of security tokens.[40]

[33] *See* Ante (n 2); Mendelson (n 2) 63.
[34] Ante and Fiedler (n 2) 609.
[35] Lambert et al. (n 10) 302.
[36] ibid 299; Mendelson (n 2) 92-93; Momtaz (n 29) 69-75.
[37] *See* Art. 2(3)(a) of MiCA; Zetzsche et al. (n 25) 218-219; European Union Blockchain Observatory & Forum, 'Blockchain and the Future of Digital Assets' 13 <https://www.eublockchainforum.eu/sites/default/files/report_digital_assets_v1.0.pdf> accessed 15 April 2023; Maume (n 10).
[38] SEC (n 11).
[39] *See, e.g.*, William H Hinman, 'Digital asset transactions: When Howey met Gary (plastic)' (SEC, 14 June 2018) <https://www.sec.gov/news/ speech/speech-hinman-061418> accessed 16 April 2023.
[40] Brett Cotler, 'Tokenized and Non-Tokenized Assets: Legal Considerations' in Baker and others (eds) (n 20) 255.

2.1.2. Technical aspects

Speaking about technical aspects, it is important to discuss smart contracts technology underlying security tokens and oracles used to connect blockchains to other applications and systems.

Smart contracts are agreements that are automatically executed by means of computerized transaction protocols, which makes an intermediary unnecessary in such transaction.[41] Execution of blockchain-based smart contracts is "distributed amongst the network of nodes[42]", i.e., decentralized.[43] Subramanian spoke about four stages of smart contracts: rules, events, executable, and settlement.[44] Let us take equity tokens with the right to dividends as an example. In such case, **rules** describe triggering events, set value or price of the tokens and determine the procedure for payments to investors (dividends). **Events** trigger the execution of a smart contract[45]; here it would be payment of the token price by the investor (in order to receive the token) and, e.g., upload of such documentation as resolution or minutes of the general meeting of shareholders. **Executables** are the steps taken by a smart contract to self-execute, so in this case these steps would be transferring security tokens to investor's wallet and, e.g., contacting a third party, such as a bank, to execute dividend payment to investor's account.[46] **Settlement** is one of the steps (executables) which refers to the transfer of funds or

[41] *See, e.g.,* Momtaz (n 29) 74-75; Ante and Fiedler (n 2) 610; Max Raskin, 'The Law and Legality of Smart Contracts' (2017) 1 GLTR 305, 309-310.
[42] "A point of intersection/connection within a data communication network. In an environment where all devices are accessible through the network, these devices are all considered nodes." – Margaret Rouse, 'Node' (*Techopedia*, 10 June 2021) <https://www.techopedia.com/definition/5307/node#:~:text=A%20node%20is%20a%20point,devices%20are%20all%20considered%20nodes.> accessed 9 May 2023.
[43] Primavera De Filippi and Samer Hassan, 'Blockchain Technology as a Regulatory Technology: From Code is Law to Law is Code' (2016) 21(12) First Monday <https://doi.org/10.5210/fm.v21i12.7113> accessed 18 April 2023.
[44] Hemang Subramanian, 'Security tokens: architecture, smart contract applications and illustrations using SAFE' (2019) 46(6) Managerial Finance 735, 738.
[45] Momtaz (n 29) 75.
[46] ibid.

crypto assets to the beneficiary as the result of satisfying encoded preconditions. The mentioned example for dividend payments represents off-chain settlement, since an external system is involved, while the transfer of security tokens to investor's wallet is a typical example of on-chain settlement as it is done purely via the blockchain.[47]

However, off-chain settlement is possible only with the use of oracles, which are like bridges "connecting blockchains to other information environments".[48] Oracles feed external or 'off-chain' data to smart contracts and serve for the purposes of verification of events, people, and identities.[49] Benedetti and Rodriguez-Garnica also suggest that oracles can help to comply with anti-money laundering (AML), know your customer (KYC), and general data protection regulation requirements.[50] On the other hand, they highlight the existence of the so-called oracle risk that consists of the external data being manipulated, changed, deleted, or flawed. Further they briefly discuss some solutions that may reduce or mitigate oracle risk, such as, e.g., auditable data trail and consensus-based oracles.[51]

To sum up, STO is an alternative option for companies, mostly startups and SMEs, to raise capital. It must be in compliance with securities laws and regulations as the tokens offered constitute securities under the law of a relevant jurisdiction. Next section specifically addresses the definition of security tokens, which implies defining the security itself under the US and the EU law.

[47] ibid.
[48] Hugo Benedetti and Gabriel Rodríguez-Garnica, 'Tokenized Assets and Securities' in Baker and others (eds) (n 20) 109-110.
[49] ibid.
[50] ibid.
[51] ibid.

2.2. Definition of Security Tokens

Lambert et al. defined security token as "a digital representation of an investment product, recorded on a distributed ledger, subject to regulation under securities laws".[52] However, according to Benedetti and Rodriguez-Garnica[53], this definition would suit more the term 'tokenized security'. They define tokenized security as "a digital blockchain-embedded representation of real-world assets or securities", while security token – "a digital blockchain-native asset [that] represents a newly created security ", but both must comply with the relevant securities laws.[54] Acheson adds on that, explaining that tokenized securities, in principle, do not differ from regular securities except of being traded and settled on blockchain.[55] That raises issues purely concerning adaptation of existing laws for distributed ledger technology (DLT).[56] Security tokens, on the other hand, share some characteristics with securities as, for example, profits sharing or voting rights, but they can also be mixed instruments and raise broader scope of regulatory issues.[57] In short, all tokenized securities can be considered security tokens but not vice versa.[58]

The Thesis addresses STOs involving both security tokens and tokenized securities, but for the purposes of conciseness, the preference is given to the term 'security tokens' unless it is crucial to highlight the difference.

However, the mentioned definitions are more technical rather than legal. As was mentioned before, security tokens must satisfy the local test or definition of 'security' to be considered

[52] Lambert et al. (n 10) 299.
[53] Benedetti and Rodríguez-Garnica (n 48) 107-121.
[54] ibid 110-111.
[55] Noelle Acheson, 'Security Tokens and Tokenized Securities Are Not the Same Thing' (*CoinDesk*, 15 February 2023) <https://www.coindesk.com/consensus-magazine/2023/02/15/we-need-clearer-terminology-for-crypto-tokenization-coindesk/> accessed 11 April 2023.
[56] ibid.
[57] ibid.
[58] ibid.

such. Thus, in order to understand the issuance of which tokens must comply with securities laws and regulations, it is crucial to define security itself.

2.2.1. The US

Securities Act of 1933[59] (Securities Act) and Securities Exchange Act of 1934[60] (Exchange Act) are fundamental legal instruments in the US securities regulation. Both acts provide for a specific and a broader definition of security, where 'note', 'stock', 'bond', and 'debenture' are specific instruments but, e.g., 'investment contract' and 'any interest or instrument commonly known as a "security"' can include a greater variety of financial products.[61] Such broad and general definition fits the policy underlying the federal securities laws – 'remedial purpose' or elimination of serious abuses from the market.[62] This means that the test is designed ambiguously on purpose in order to prevent issuers from the avoidance of securities laws in case their investment product is not on the list of securities.

In 1946, that policy materialized in the open-ended definition developed by the US Supreme Court for determining what constitutes an investment contract – the so-called *Howey* test.[63] The test reflects the approach of substance over form and focuses on economic reality.[64] The *Howey* test is of importance in relation to security tokens, since the SEC applies it to crypto asset sales starting from the DAO Report, which is referred to further in relation to the prongs of the test.

[59] Securities Act of 1933, 15 U.S.C. §§ 77a-77mm (1934) (US).
[60] Securities Exchange Act of 1934, 15 U.S.C. § 78a *et seq.* (US).
[61] Sec. 2(a)(1), 2A, 3(a)–(c) of the Securities Act (n 61); Sec. 3(a)(10) and 3A of the Exchange Act; *see also* Coffee et al. (n 26) 273.
[62] *See United Housing Foundation, Inc. v Forman* [1975] 421 U.S. 837 [849].
[63] *SEC v W.J. Howey Co.* [1946] 328 U.S. 293.
[64] ibid [298].

According to that test, an instrument is considered an investment contract (security) if there has been 1) an investment of money, 2) into a common enterprise, 3) with the expectation of profits, 4) to be derived solely from the efforts of others.[65] However, since the *International Loan Network* case, the word 'solely' in the last element of the test is interpreted to mean 'predominantly'.[66]

Within the context of crypto assets, it is important to note that the 'investment of money' requirement is not limited to cash or fiat currencies and also includes investment of crypto assets as admitted by the SEC.[67] Thus, crypto assets in principle do satisfy the first prong of the Howey Test.

Commonality is in general a more controversial element of the test as there exist two approaches followed by the courts: horizontal and vertical commonality which, in turn, can be broad or narrow.[68] In short, horizontal commonality exists where there is pooling of the investors' resources[69], and vertical – where investors' resources are connected to managerial efforts (broad vertical commonality)[70] or, additionally, the investors' profits are linked with issuer's profits (narrow vertical commonality).[71]

In its DAO Report, the SEC left aside this point of the analysis but around two years later it published non-binding guidelines on the application of the *Howey* test to crypto assets, where

[65] ibid [298]–[299].
[66] *SEC v International Loan Network, Inc.* [1992] 068 F.2d [1304], [1308].
[67] SEC (n 19) 11; *see also Uselton v Comm. Lovelace Motor Freight, Inc.* [1991] 940 F.2d 564 [574] (cited by the SEC).
[68] *See, e.g.,* James D. Gordon, 'Defining a Common Enterprise in Investment Contracts' [2012] 72 (1) Ohio St. L.J. 59-94.
[69] *See, e.g., Hocking v Dubois* [1988] 839 F.2d 560 [566]; *Revak v SEC Realty Corp.* [1994] 18 F.3d. 81 [87]–[88].
[70] *See, e.g., SEC v Unique Fin. Concepts, Inc.* [1999] 196 F.3d [1199]–[1200]; *Eberhardt v Waters* [1990] 901 F.2d 1578 [1580]–[1581].
[71] *See, e.g., SEC v Glenn W. Turner Enterprises, Inc.* [1973] 474 F.2d 476 [482]; *SEC v SG Ltd.* [2001] 265 F.3d 42 [49].

it stated that a 'common enterprise' *typically exists* in crypto asset offerings.[72] The SEC also highlighted that contrary to courts it does not view commonality as a distinct element of the test, nor does it require vertical or horizontal commonality *per se*.[73] As per author's understanding, this means that the SEC searches for *any* commonality, notwithstanding the type of it. However, the outcome may vary depending on the court. Mendelson also suggested that 'common enterprise' element is easily met unless the ICO's or STO's underlying network is purely a non-profit, open-source project.[74]

'Expectation of profits' is clearly in place where the profits are promised by the issuer itself[75] and where no dual motive on the side of investors exists, i.e., the sole motive of an investor is to gain profits or return on investment and not, e.g., to use the product or service of the issuer. However, questions may arise where the issuer offers utility tokens. On the one hand, they provide an investor with an ability to use the underlying network or other product/service of the issuer. On the other hand, they have speculative nature and may raise and fall in price on the secondary market.

Solana's utility token SOL is a good example of such duality. It enables holders to use Solana blockchain for running decentralized apps as the tokens can be used to pay transaction fees.[76] However, SOL is volatile and traded on such crypto exchanges as Coinbase and Kraken.[77] The price of SOL (as well as of many other crypto assets) has been changing dramatically in the past years: in August 2021 the price began to rise and the peak was EUR 237.02 in November 2021, but since then it was constantly declining and now SOL's worth is just around EUR 19.[78]

[72] FinHub of the SEC, 'Framework for "Investment Contract" Analysis of Digital Assets' (pub. 3 April 2019) <https://www.sec.gov/corpfin/framework-investment-contract-analysis-digital-assets> accessed 27 April 2023.
[73] ibid.
[74] Mendelson (n 2) 75.
[75] *See, e.g., Warfield v Alaniz* [2009] 569 F.3d 1018.
[76] Coinbase, 'Solana SOL' <https://www.coinbase.com/price/solana> accessed 10 May 2023.
[77] *See* ibid; Kraken, 'Solana' <https://www.kraken.com/prices/solana> accessed 10 May 2023.
[78] Coinbase (n 76).

Such volatility allows for speculations and many investors may acquire these tokens with an expectation of profits from secondary market trading, while others may just use the tokens for paying transaction fees on the platform. In such case, there is usually a dual motive: investment versus consumption. According to *Forman* and *Life Partners* cases, where an investor's primary motive is consumption of the purchased product, the securities laws do not apply.[79] In *Forman*, the investment product were shares of stock that entitled an investor to rent an apartment in a non-profit housing cooperative, so the consumption was made of apartments.[80] The Court also mentioned the consumption principle in *Life Partners*, where investors could acquire a claim on future death benefits, which, however, could not be considered consumption.[81] In *Forman* it was concluded that it was impossible to make profit on a resale of the shares of 'stock' in question, so there was no 'expectation of profits'.[82] Moreover, the expectation of profits can be met where investors risk their capital in case the underlying product is still in the development[83], which is often the case with token pre-sales. It is also important to note that this element of the test is met if investors expect an increase in value of the investment.[84]

Altogether this suggests that for utility tokens not to qualify as a security, they should be riskless (in terms of not risking the capital where the underlying product is not ready yet), not traded on a secondary market (non-transferable) or their supply should not be limited and price fluctuations must be then controlled by the issuer by buying and selling tokens.[85] Limited supply or limited transferability can prevent the expectation of an increase in price of tokens or the expectation of profits from secondary market trading.

[79] *Forman* (n 62) [852]; *SEC v Life Partners, Inc.* [1996] 87 F.3d 536 [547]
[80] *Forman* (n 62).
[81] *Life Partners* (n 79).
[82] *Forman* (n 62). Such conclusion was made partially due to the resale restrictions (non-transferability).
[83] *See Silver Hills Country Club v Sobieski* [1961] 361 P.2d 906 [908].
[84] *SEC v Edwards* [2004] 540 U.S. 389 [390].
[85] *See* Maas (n 28) 36.

'Predominantly from the efforts of others' is often viewed by courts from the perspective of the degree of managerial control over the enterprise.[86] Courts assess whether the efforts of 'others' are undeniably significant, "i.e. those essential managerial efforts which affect the failure or success of the enterprise".[87] This means that in case investors have no influence on the enterprise and/or their efforts are less significant than the ones of 'others'[88], the last element of the test is met, and hence the instrument is a security.

The simplest example would be security tokens that do not provide investors with voting rights, but they receive dividends or expect increase in value and trade tokens on a secondary market. Where, however, investors are granted voting and therefore governance rights, the outcome could be different as their degree of control could potentially become higher than the one of the promoters and third parties. On the other hand, it is very unlikely in crypto world as even in case of DAO, from the first glance very democratic blockchain network[89], the SEC concluded that it nevertheless met the last element of the test. First, the SEC stated that choices to be made by token holders were limited to those provided by the group involving the DAO's co-founders.[90] Second, the SEC emphasized the fact that token holders were widely dispersed and limited in communication with each other, which made it difficult for them to gain a higher degree of control or to exercise 'meaningful' control.[91] Thus, in the context of token sales, the author considers it to be rather an exceptional situation, where investors would *not* be dependent on the efforts of a promoter or a third party (i.e., in the majority of cases, investors' returns on investment depend on the managerial efforts).

[86] *See, e.g., SEC v Glenn W. Turner Enters.* [1973] 474 F.2d 476 [482]–[483]; *see also* Mendelson (n 2) 80.
[87] *Glenn W. Turner Enters.* (n 71) [482].
[88] *See, e.g., Endico v Fonte* [2007] 485 F. Supp. 2d 411 [415].
[89] DAO stands for a decentralized autonomous organization that is governed by token holders (decentralized governance) by means of smart contracts (autonomous). The author considers such concept of corporate governance very democratic in a sense that it is quite easy to purchase tokens and to exercise the voting rights. – *See, e.g.,* SEC (n 19) 4-5.
[90] ibid 13-14.
[91] ibid 14-15.

Although the *Howey* test seems to be pretty clear, there still exists some uncertainty regarding classification. Even US regulators themselves cannot agree among each other how to characterize some crypto assets. For instance, the Commodity Futures Trading Commission (CFTC) has recently filed a lawsuit against Binance and its CEO Changpeng Zhao claiming, i.a., that defendants violated commodities regulations.[92] The CFTC in its suit tried to characterize various crypto assets offered by Binance and considered them commodities, where Binance USD was one of them.[93] The CFTC has not analyzed in details whether each of the assets constitutes a commodity, but they reached such conclusion based on the name and description of a Binance product "Binance Options", where all the settlements are done in Binance USD.[94] However, around one month before that lawsuit, the SEC issued a Wells notice[95] to Paxos which issued and listed Binance USD.[96] So, Paxos had a dual position, both as the issuer and as the exchange (itBit), which is pretty common in crypto market.[97] The notice alleged that the crypto asset in question is an unregistered security, and hence Paxos breached securities laws.[98] However, it must be noted that any crypto asset qualifying as a security at the stage of issuance could become a commodity on the secondary market.[99] If this happens, as in

[92] *See* Nikhilesh De et al., 'Binance, CEO Zhao Sued by CFTC Over "Willful Evasion" of U.S. Laws, Unregistered Crypto Derivatives Products' (*CoinDesk*, 27 March 2023) <https://www.coindesk.com/business/2023/03/27/binance-and-cz-sued-by-cftc-over-regulatory-violations/> accessed 9 April 2023.

[93] *CFTC v Zhao, Binance and* others [2023] 1:23-cv-01887, 'COMPLAINT FOR INJUNCTIVE AND OTHER EQUITABLE RELIEF AND CIVIL MONETARY PENALTIES UNDER THE COMMODITY EXCHANGE ACT AND COMMISSION REGULATIONS' §24 <https://storage.courtlistener.com/recap/gov.uscourts.ilnd.431767/gov.uscourts.ilnd.431767.1.0_1.pdf>.

[94] ibid §58.

[95] Wells notice is the SEC's formal notice, notifying the prospective defendant of the substance of charges that the regulator intends to bring against them, and giving the defendant the opportunity to address the decision maker prior to the filing of an action. – Mark Astarita, 'The Wells Notice SEC/FINRA Investigations' (*Sec Law.com*) <https://www.seclaw.com/wells-notice-sec-finra-investigations/> accessed May 9, 2023.

[96] *See* Vicky Ge Huang et al., 'Crypto Firm Paxos Faces SEC Lawsuit Over Binance USD Token' (*The Wall Street Journal*, 12 February 2023) <https://www.wsj.com/articles/crypto-firm-paxos-faces-sec-lawsuit-over-binance-usd-token-8031e7a7> accessed 9 April 2023; Andjela Radmilac, 'The SEC vs. Paxos: A deep dive into the implications of the lawsuit and its effects on stablecoins' (*CryptoSale*, 4 April 2023) <https://cryptoslate.com/market-reports/sec-vs-paxos-a-deep-dive-into-the-lawsuit-and-its-effect-on-stablecoins/> accessed 9 April 2023.

[97] *See, e.g.*, Ripple (XRP), Stellar (XLM).

[98] ibid.

[99] Moffett (n 23) 730.

case with Binance USD, then the exchange is responsible for the compliance with commodities regulations and not the issuer.

To conclude, the current stance of the SEC is that almost all crypto assets qualify as securities even where their 'primary' purpose is to provide utility, e.g., paying transaction fees for the use of the underlying network such as blockchain or crypto exchange (utility tokens). Where tokens qualify as securities, the federal securities regulation applies to the full extent, which raises doubts as to the cost efficiency and intermediary elimination associated with STOs. The understanding of the *Howey* test, however, may help issuers to design and structure their tokens in a way not to fall under the securities regulation.

2.2.2. The EU

The European approach to defining 'security' is different from the US one, since it focuses mainly not on the function but on the 'name' or form of a security. Instead of functional approach and open-end definition, the EU tried to formulate a statutory closed-end definition that would encompass some crucial elements of a security and would be open to Member States' interpretation. The definition of 'financial instrument' that includes securities *and* commodities is provided in MiFID II and, at first glance, is similar to the US definitions as it is a long list of different financial instruments.[100] However, it is notable that the Directive's definition has been recently amended to also include in its scope DLT financial instruments, and such amendment must have been implemented by all Member States by 23 March 2023

[100] Art. 4(1)(15) and Section C of Annex I of MiFID II (n 14).

(with possible prolongation of the deadline)[101], i.e., Member States could not opt out from recognizing DLT financial instruments.[102]

Moreover, the term 'financial instrument' is broader than 'security', and MiFID II refers to securities as 'transferable securities'. These are defined as follows: "(…) those *classes of securities* which are *negotiable on the capital market*, with the exception of instruments of payment, *such as* (a) shares (…); (b) bonds (…); (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 (emphasis added)". No elements of the *Howey* test are clearly visible in the MiFID II definition, which is also not surprising due to the differences in approaches, but the EU has other requirements and elements of a security as follows.

The cashflow from issuer to owner of a security, which also characterizes shares and bonds, is a sign of a 'transferable security', although it is not a requirement.[103] 'Negotiability on the capital market' is interpreted differently among Member States[104], but it can often be understood as an abstract possibility of being traded.[105] Another interpretation is that any instrument "granting a flow of monies is potentially negotiable in the *capital* markets".[106] 'Transferability' requirement, that usually is coupled with 'negotiability', is evident from the term itself ('*transferable* securities'). Veil also mentioned 'standardization' as an unwritten

[101] Art. 18 of DLT Pilot Regime (n 12).
[102] However, as of now, among the chosen three European jurisdictions, only Luxembourg has officially transposed the new definition.
[103] Maume (n 10) 191.
[104] *See, e.g.,* Zetzsche et al. (n 25) 218; Clifford Chance, *Security Token Offerings – a European Perspective on Regulation* (Briefing, 2020) 10 <https://www.cliffordchance.com/content/dam/cliffordchance/briefings/2020/10/security-token-offerings-a-european-perspective-on-regulation.pdf> accessed 6 May 2023.
[105] European Securities and Markets Authority (ESMA), *Annex 1: Legal qualification of crypto-assets – survey to NCAs* (ESMA50-157-1384, 2019) 6 <https://www.esma.europa.eu/sites/default/files/library/esma50-157-1384_annex.pdf> accessed 6 May 2023.
[106] Philipp Maume and Mathias Fromberger, 'Initial Coin Offerings: Are Tokens Securities under EU Law?' (*Oxford Business Law Blog*, 7 September 2018) <https://blogs.law.ox.ac.uk/business-law-blog/blog/2018/09/initial-coin-offerings-are-tokens-securities-under-eu-law> accessed 6 May 2023.

requirement of European definition.[107] Most of the Member States that currently have some guidelines on classification of crypto assets also require embodiment of rights similar to conventional securities.[108]

Unfortunately, even the guidelines of these Member States remain unclear to certain extent. For instance, Malta Financial Services Authority (MFSA) requires a security token to have a maturity at issuance of more than 397 days in addition to negotiability and transferability and embodiment of similar features to be considered a transferable security.[109] From the wording it seems that unless there is such maturity, the instrument is not a security, which is very strange, since, e.g., shares do not have maturity date either. The rationale behind this maturity requirement is Art. 3 of the Directive 2007/16/EC [110], which concerns money-market instruments. This requirement does not seem to fit, since MiFID II itself differentiates between transferable securities and money-market instruments. Moreover, it is not clear how would an instrument be classified in case it is negotiable and transferable but does not possess any "features of transferable security" and is not a payment instrument. In case it would be considered a payment instrument but not electronic money, it could potentially be classified as utility token as the EU now officially recognizes them.[111] Maltese guidelines in general seem pretty vague as well as technical and complicated. However, the MFSA has at least created a matrix which allows issuers to see how their investment product would qualify in Malta.[112]

[107] Rüdiger Veil, 'Financial Instruments' in Veil (n 24) 115 § 8 para. 5; *see also* Uwe H Assmann, in Uwe H Assmann and Mülbert Schneider (eds), *Kommentar zum WpHG* (Otto Schmidt 2009) §2 para. 7; Susanne Kalss et al. (eds), *Kapitalmarktrecht I* (Linde 2015) §1 para. 4.
[108] *See, e.g.,* EFSA (n 19); MFSA (n 19) 10-11; *see also* Niamh Moloney, *EU Securities and Financial Markets Regulation* (4th edn, Oxford University Press 2023) 215.
[109] MFSA (n 19) 11-12.
[110] Commission Directive 2007/16/EC of 19 March 2007 implementing Council Directive 85/611/EEC on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS) as regards the clarification of certain definitions [2007] OJ L 797.
[111] Utility tokens and their issuance are now regulated by MiCA, which is discussed in the end of this subsection.
[112] MFSA, 'Financial Instrument Test' <https://www.mfsa.mt/our-work/virtual-financial-assets/guidance/> accessed 26 May 2023.

Notably, Estonian Finantsinspektsioon (EFSA) highlighted that even where an issuer classifies its tokens as utility tokens, they nevertheless may be considered security tokens if they give rise to an *expectation of profits*.[113] It is interesting how Estonian authority mentions the element of the *Howey* test, however, it is unclear whether the regulator actually considers 'expectation of profits' in its assessment as the article specifies that it does not constitute legal advice or an explanation.[114] The article was last edited in November 2022, before the DLT Pilot Regime and MiCA came into force, which means that further explanations and guidelines on behalf of the EFSA might follow soon. Back in 2018, the EFSA published another article, where it stated that tokens may qualify as securities, and in such case the offering must be in accordance with securities laws.[115] The regulator highlighted that it follows 'substance over form' approach and provided that "tokens which give investors certain rights in the issuer company or whose value is tied to the future profits or success of a business are likely to be considered securities".[116] However, new article mentioned the requirement for a token to be "similar to a typical transferable security" to qualify as such.[117] Moreover, Estonian Securities Market Act also tries to list all known securities even in more details than MiFID II.[118] This altogether raises doubts as to the EFSA's 'substance over form' approach.

The regulatory authority of Luxembourg, Commission de Surveillance du Secteur Financier (CSSF), on the other hand, has not issued any special guidelines or explanations regarding the classification of crypto assets so far. Luxembourg has rather focused on drafting and amending its financial laws to include security tokens into their scope. Hence, although Luxembourg has specified that financial instruments also include DLT financial instruments earlier than the

[113] EFSA (n 19).
[114] ibid.
[115] EFSA, 'The legal framework of initial coin offering in Estonia' (10 September 2018) <https://www.fi.ee/en/investment/aktuaalsed-teemad-investeerimises/virtuaalraha-ico/legal-framework-initial-coin-offering-estonia> accessed 6 May 2023.
[116] ibid.
[117] EFSA (n 19).
[118] Art. 2 of Securities Market Act RT I 2001, 89, 532 (EE).

whole EU, it has just copied the list from Section C of Annex I of MiFID II without explaining what a transferable security is.[119]

Additionally, the European Parliament has finally adopted MiCA, the first EU comprehensive crypto regulation, that addresses issuers of, i.a., utility tokens and crypto asset service providers.[120] Utility token is defined in the Regulation as "a type of crypto-asset that is *only* intended to provide access to a good or *a service supplied* by its issuer".[121] However, MiCA also establishes a new category – crypto assets, other than asset-referenced tokens or e-money tokens, and regulates them in a similar manner as securities regulation but less stringently (e.g., no approval by the National Competent Authority (NCA) prior to publication of a white paper).[122] This category includes all other crypto assets that are not purely tokenized securities, utility tokens, stablecoins or e-money (payment) tokens. In author's view, this is the sign that the EU recognizes the need for securities-like regulation of crypto assets that do not fit in the close-end definition. Although MiCA establishes the regulation of security tokens (in this case, mixed products that do not qualify as tokenized securities), it does not solve the larger issue of leaving the emerging investment instruments outside the scope of regulation.

Overall, Europe does not have purely 'substance over form' approach as the US, since Member States pay specific attention to the similarity or non-similarity of rights granted to crypto investors to those of conventional securities investors. In contrast to the *Howey* test, this leaves the space for manipulations by issuers, since they could design tokens giving investors such

[119] *See* Art. 1(19) and Section B of Annex II of Law of 5 April 1993 on the financial sector, as amended (Financial Sector Law) (LU).
[120] Niall Esler et al., 'EU Crypto Regulation - MiCA and TFR adopted' (*Lexology*, 20 April 2023) <https://www.lexology.com/library/detail.aspx?g=1dede3bd-bcaf-401c-be99-271096135855> accessed 3 May 2023.
[121] Art. 3(1)(9) of MiCA (n 13).
[122] *See* ibid Title II; *see also* Dr. Verena Ritter-Döring and Miroslav Đurić, 'Navigating MiCA (Part 2): Offering of crypto-assets to the public under the new regime' (*TaylorWessing*, 16 May 2023) <https://www.taylorwessing.com/en/insights-and-events/insights/2023/05/navigating-mica-pt-2> accessed 14 June 2023.

rights which are completely different from known securities and hence avoid securities laws. MiCA, however, potentially solves the problem with crypto assets that functionally resemble securities but do not fit within the statutory definition. Thus, it can be concluded that MiFID II, Prospectus Regulation[123], and local securities laws regulate the issuance of *tokenized securities*, while MiCA will regulate, i.a., the issuance of *security tokens* that are formally different from conventional securities.

2.3. Advantages of STO over IPO and other securities offerings

The main difference between the process of STO and IPO is the nature of the offered security and, hence underlying technical solutions. Ante and Fiedler summarized advantages of security tokens over conventional securities as follows: 1) immediate transferability of tokens and ability to trade 24/7 on secondary markets, 2) extremely fast clearing and settlement, 3) tokens are held privately, i.e., no need in intermediaries as brokers and custody accounts, and 4) transparency of all transactions due to blockchain.[124] The researchers also highlighted that since security tokens can be encoded to additionally serve as means of payment or as utility tokens, the issuer is able to access not only investors but also potential customers.[125]

Some researchers claim that blockchain's settlement finality could allow for much faster and more efficient clearing and settlement compared to conventional exchanges, where it takes up to three business days[126]; and instant updates in such clearance system could save capital

[123] Regulation (EU) 2017/1129 of the European Parliament and of the Council of 14 June 2017 on the prospectus to be published when securities are offered to the public or admitted to trading on a regulated market, and repealing Directive 2003/71/EC (Prospectus Regulation) [2017] OJ L 168.
[124] Ante and Fiedler (n 2).
[125] ibid 611.
[126] David Mills et al., *Distributed ledger technology in payments, clearing, and settlement* (Finance and Economics Discussion Series 2016-095, 2016) 15; Ingo Fiedler et al., 'Distributed Ledger Technology: A Possible Way Forward for Securities Clearing' (2018) Binary District <https://www.blockchainresearchlab.org/wp-content/uploads/2020/05/DLT-Clearing-Binary-District-Journal-4.pdf>.

markets up to USD 1.2 billion annually.[127] However, at the moment, capital markets' transfer to blockchain-based systems seems too costly and not worth it as it still would be slower than current systems that have been tested and working for many years.[128]

Another common argument in favor of STOs is cost efficiency. Most often, companies offering tokenization and other crypto services claim that STOs do not require intermediaries such as banks, brokers and others, therefore intermediary fees and thus total costs are reduced.[129] Moreover, even experts and academics state that STOs are associated with lower costs by, e.g., reducing advisory fees and ownership administration costs.[130] On the other hand, Lambert et al. concluded that issuance of security tokens may be costlier in jurisdictions where primary record is paper-based or stored in a government-owned, centralized system; as well as consequential documentation of corporate actions might increase the issuer's costs.[131]

To conclude, advantages of STOs can be determined only after analysis of the regulation of a particular jurisdiction, since intermediaries' involvement depend on that.

3. COMPARATIVE ANALYSIS OF REGULATION OF STOs

While the previous Chapter provided the guidance as to which crypto assets would qualify as securities in the US and the EU, this Chapter compares the securities regulations of these jurisdictions applicable to Security Token Offerings (STOs). This Chapter does not address regulations one by one but rather compares legal status of STOs [3.1.], applicable limitations [3.2.], and requirements [3.3.].

[127] Andrea Pinna and Wiebe Ruttenberg, *Distributed ledger technologies in securities post-trading. Revolution or evolution?* (European Central Bank Occasional Paper No. 172, 2016) 28-29.
[128] *See* Kaminska (n 5); also confirmed by Weixelbaumer (n 5).
[129] *See, e.g.,* Kira Belova, 'Walkthrough Overview of Security Token Offerings' (*pixelplex*, 13 July 2021) <https://pixelplex.io/blog/sto-regulations/> accessed 29 April 2023.
[130] *See* Momtaz (n 29) 63.
[131] Lambert et al. (n 10) 319.

3.1. Legal Status

First, both the US and the EU did not impose any bans on STOs or crypto market in general, they are rather regulating it. Thus, STOs are legal as such in both jurisdictions, however, they must comply with applicable laws and regulations. On the other hand, the level of acceptance by regulators and legislators and the possibility to launch a fully compliant STO must be assessed within the scope of legal status, since this would reflect the realistic picture and not just the letter of law. Additionally, the extent of legal certainty surrounding STOs shall be addressed as it affects the risks and costs of issuance.

3.1.1. Level of acceptance by regulators and legislators

The Securities and Exchange Commission (SEC) may seem aggressive towards the crypto assets issuers, however, it just enforces regulation. Moreover, the SEC has been even accused of doing its job poorly and not protecting investors enough after the collapse of FTX (crypto exchange that got hacked and around USD 415 million worth of crypto assets has been stolen[132]).[133] The rising number of lawsuits filed by the SEC does not necessarily reflect a negative attitude of the regulator, rather a cautious work.

Regulators among the EU Member States have different views on STOs, but some of them seem more friendly towards those, judging by the issuance of opinions, guidelines and regulations. For example, Malta Financial Services Authority (MFSA) shows its interest and

[132] *See, e.g.,* Peter Hoskins, 'FTX: Collapsed crypto exchange says $415m was hacked' (*BBC*, 18 January 2023) <https://www.bbc.com/news/business-64313624> accessed 26 May 2023.
[133] *See, e.g.,* Hal Scott and John Gulliver, 'A Question for Congress: Why Didn't the SEC Stop FTX?' (*The Wall Street Journal*, 18 January 2023) <https://www.wsj.com/articles/a-question-for-congress-why-didnt-the-sec-stop-ftx-crypto-exchange-assets-investors-bankruptcy-fraud-sam-bankman-fried-11674063645> accessed 26 May 2023; Chelsey Cox, 'Top House Republicans scrutinize SEC investigation of failed crypto exchange FTX' (*CNBC*, 10 February 2023) <https://www.cnbc.com/2023/02/10/ftx-collapse-top-house-republicans-scrutinize-sec-investigation-of-failed-crypto-exchange.html> accessed 26 May 2023.

'support' to the issuers of security tokens though the Financial Instruments Test and Guidelines to it, which allow issuers to have a better understanding of how the assets are categorized.[134] More importantly, Malta has a separate legal act devoted to Virtual Financial Assets which are defined there as "(…) any form of digital medium recordation that is used as a digital medium of exchange, unit of account, or store of value and that is not – (a) electronic money; (b) a financial instrument; or (c) a virtual token;".[135] The MFSA gathered all the relevant information on crypto asset related services, including issuance, on a separate page on its website[136], which is very useful for the interested parties. Regulations and rules issued by the regulator are also available there. In author's opinion, the fact that Maltese regulator differentiates between crypto assets that qualify as securities under MiFID II and other virtual financial assets, signals a high degree of involvement as the MFSA does not avoid additional work by formally stating that some crypto assets may be considered securities. The MFSA recognizes that not all crypto assets fall under the not so flexible MiFID II definition, however, they still might resemble the securities and hence require similar regulation. Moreover, Malta also separates utility tokens ('virtual tokens' as in the Virtual Financial Assets Act) into another category.[137] Such regulatory and categorization-related incentives, that happened even before MiCA, reflect how welcoming but at the same time cautious Malta is in relation to STOs.

Estonia used to have a loose regulation of crypto offerings[138] but soon admitted, at least formally, that tokens can qualify as securities and fall under the scope of securities laws.[139]

[134] MFSA (n 112) and (n 19).
[135] Virtual Financial Assets Act, Act XXX of 2018 (November 1 2018) (MT) Part I 2(2).
[136] MFSA, 'Virtual Financial Assets' <https://www.mfsa.mt/our-work/virtual-financial-assets/> accessed 5 June 2023.
[137] *See* Virtual Financial Assets Act (n 135).
[138] Mostly due to it being an opportunity to attract capital to the country but also partially due to the lack of competence of the previous regulator that was in the hands of the Ministry of Interior Affairs instead of the Ministry of Finance – *see* Pascale Davies, 'Estonia used to be a crypto pioneer but is now clamping down on crypto licenses. This is why' (*euronews.next*, 20 June 2022) <https://www.euronews.com/next/2022/06/01/estonia-used-to-be-a-crypto-pioneer-but-is-now-clamping-down-on-crypto-licenses-this-is-wh> accessed 5 June 2023.
[139] EFSA (n 19).

Except of publishing unofficial opinions, Estonian Finantsinspektsioon (EFSA) did not issue any specific regulations. Additionally, it is not easy to find a case study of an STO launched in Estonia. Considering the amount of information provided to the potential issuers, it can be concluded that the EFSA is not particularly interested in developing this market segment. On the other hand, Estonia was among the first countries to implement some MiCA provisions before its official adoption (e.g., minimum capital requirements and transparency rules for Virtual Asset Service Providers (VASPs)[140], so the regulator is active in the crypto market. Thus, the EFSA should be responsive and assistive in relation to the issuers with queries relating to STOs.

Luxembourg can generally be considered an STO-friendly jurisdiction, since legislators have officially allowed the use of distributed ledger technology (DLT) for trade in securities by amending the Law of 1 August 2001 on the circulation of securities.[141] According to that, the Law of 6 April 2013 on dematerialised securities[142] applies to the issuers of security tokens. However, such legislation explicitly allows only for the issuance of tokenized securities (i.e., conventional securities recorded and distributed on blockchain), while the stance of other security tokens (e.g., with additional utility/consumption) features remains uncertain. For instance, the Luxembourg Stock Exchange (LuxSE) admits security tokens for trading since January 2022[143], but only those tokens which fully mirror the features of conventional debt securities. There are also other crypto exchanges registered with Commission de Surveillance du Secteur Financier (CSSF) that list a greater variety of security tokens. STOKR is one of these exchanges, which however is registered as a VASP just for anti-money laundering (AML)

[140] *See, e.g.*, Davies (n 138).
[141] Art. 18a(1) of the Law of 1 August 2001 on the circulation of securities (coordinated version) (LU).
[142] Law of 6 April 2013 on dematerialised securities (LU).
[143] Luxembourg Stock Exchange (LuxSE), 'Listing at LuxSE: security tokens' <https://www.luxse.com/listing/security-tokens> accessed 7 June 2023.

purposes (not as investment firm or broker).[144] Thus, tokenized security offerings are fully and transparently regulated in Luxembourg, however, STOs are not particularly regulated or explained by the regulator.

However, the entry into force of MiCA will change the situation with varying attitude of the National Competent Authorities (NCAs) towards STOs that offer not tokenized securities but other security tokens, since then all Member States will be obliged to comply with the requirements of the Regulation.

3.1.2. Possibility to launch a fully compliant STO

US proves to be a jurisdiction, where it is possible to launch a fully compliant STO, based on such examples as RealT and tZERO.[145] Notably, possibility to be fully compliant does not necessarily entail the compliance with the strictest requirements; on the other hand, it could be applying for an exemption from some requirements (e.g., Regulation S and D[146] as in case of RealT and tZERO accordingly).[147] In Luxembourg, mostly only large, well-established companies and financial institutions could list their security tokens (so far, only debt DLT securities) on the LuxSE[148], but smaller companies were also issuing through known and regulated crypto exchanges (although most of them are not authorized as trading venues under MiFID II).[149] Germany is similar to Luxembourg in this regard as there also many security

[144] STOKR, 'General Terms' <https://stokr.io/legal> accessed 7 June 2023.
[145] *See, e.g.,* Security Token Market, '4061 Grans St Token' <https://stomarket.com/sto/4061-grand-st-realt> accessed 8 June 2023; Security Token Market, 'tZERO Token' <https://stomarket.com/sto/tZERO> accessed 8 June 2023.
[146] SEC Regulations providing for the exemption from securities registration. Discussed in more details in the next subsection.
[147] *See* RealT, 'Private Placement Memorandum amended as of August 15, 2019, REALTOKEN LLC – SERIES #1-9943 Marlowe' <https://realt.co/wp-content/uploads/2019/09/REALTOKEN-LLC-SERIES-1-9943-MARLOWE-1.pdf> accessed 8 June 2023; SEC, 'Notice of Exempt Offering of Securities' (tZERO) <https://www.sec.gov/Archives/edgar/data/1726726/000172672618000004/xslFormDX01/primary_doc.xml> accessed 8 June 2023.
[148] *See* 'Recent admissions' at LuxSE (n 143).
[149] *See, e.g.,* STOKR, 'Featured Assets' <https://stokr.io/featured-assets> accessed 8 June 2023; Black Manta, 'Current Offerings' <https://blackmanta.capital/invest/> accessed 8 June 2023.

tokens are issued, but most of them being bonds and other debt instruments[150]. Malta seems to be a feasible jurisdiction, since it has sector-specific laws and a regulator with partial focus on crypto sector as well as Malta Stock Exchange also admits tokenized securities to trading.[151] However, finding any case studies or listings of security tokens in Malta is problematic, which leaves doubts regarding the possibility of launching a fully compliant STO. With Estonia it is also somewhat uncertain whether the regulator approves STOs and how easily, since there are no case studies and little information from the regulator.

However, in the near future, Member States will be obliged to comply with MiCA, which will make the issuance of the tokens that are not purely tokenized securities, but also are not pure utility tokens (mixed products), clearer and more feasible.

3.1.3. Legal Certainty

Market participants from the US demand clarifications due to the lack of clarity on the market. Coinbase, the largest crypto exchange in the US, after receiving Wells notice has requested the SEC to provide specific rules for crypto assets to qualify as a security and on the application of current securities regulation to such assets, however, there was no response on behalf of the SEC.[152] Now, Coinbase filed a lawsuit demanding courts to oblige the SEC to give the requested clarity to crypto market participants by regulating the market or at least to somehow react to the petition.[153] However, market participants, especially exchanges, mostly push

[150] *See, e.g.,* Security Token Market, 'The Fundament Group Token' <https://stomarket.com/sto/the-fundament-group-fund> accessed 8 June 2023; Bitbond, 'Introducing the Bitbond Token (BB1)' <https://www.bitbondsto.com> accessed 8 June 2023.
[151] *See, e.g.,* Malta Stock Exchange, 'MSE and Binance sign MoU' <https://www.borzamalta.com.mt/news-and-articles/articles/mse-binance-mou> accessed 8 June 2023; OKX, 'OKX and MSX Sign an MoU to Launch a New Platform for Security Tokens' <https://www.okx.com/help-center/360007668231> accessed 8 June 2023.
[152] Coinbase, Inc.'s Petition for Writ of Mandamus to the SEC (2023) 3-4 < https://assets.law360news.com/1600000/1600663/coinbase%20-%20mandamus%20petition%20(to%20file).pdf > accessed 5 May 2023.
[153] ibid.

regulators for clarifications in order to either achieve a less strict regulation though categorizing crypto assets as commodities or get a precise definition of a crypto asset that is a security so that it would be easier to avoid securities regulations.[154] In reality, the *Howey* test is absolutely transparent and every issuer or exchange can apply it to tokens, but it is not profitable for them to issue or list securities and bear the regulatory costs.

In Europe, due to the 'closed-end' definition of security, there is still a lack of legal certainty concerning security tokens that do not fit within the frames of conventional securities and represent more complicated and/or mixed products. Such countries as Luxembourg and Malta clarify on a legislative level that tokenized securities can be listed and traded similarly with conventional ones, but they leave the other part of security tokens yet aside. MiCA, however, sheds light on the regulation of other crypto asset offerings, such as Initial Coin Offerings (ICOs) (utility tokens) and mixed products as well.[155] DLT Pilot Regime also provides some certainty on the secondary market, which should be also important for issuers as the lack of certainty or the lack of secondary market in general could harm the primary offerings. Unfortunately, there is still no practice in application of MiCA to crypto asset offerings, so it cannot be concluded whether the law will be enforced uniformly across the Member States (although it must) and how efficiently it will be enforced.

3.2. Requirements

This subsection covers disclosure requirements, including prospectus, and exemptions from them as well as requirements relating to intermediaries involved in the STO.

[154] Charles K. Whitehead, consultation (26 May 2023).
[155] *See* Title II of MiCA (n 13).

Under the US securities regulation, the issuers must register securities with the SEC by filing the registration statement and prospectus before offering the securities to the public.[156] In these documents, the issuers are expected to disclose the material information by means of, i.a., disclosing company's documents, such as, e.g., audited financial statements.[157] This procedure is similar in the EU as issuers are also required to register securities with the NCA (however, a local one) by filing a prospectus and disclosing similar information.[158] Both the US and the EU have 'gun jumping'[159] rules that prohibit the promotion of securities before the filing of the registration statement and/or publication of an approved prospectus, however, the US rules have broader scope that includes restrictions on making offers, soliciting investors, and promoting the securities.[160] The issuers are also able to apply for exemptions from registration and prospectus requirements.

The US securities regulation provides for various exemptions from registration requirements both through the Securities Act[161] and separate regulations, such as Regulation Crowdfunding (CF), Regulation A+ (Reg A+), Regulation D (Reg D) and Regulation S (Reg S). General exemptions provided in the Securities Act that are relevant for SME issuers include, e.g., private offerings (only accredited investors) [162] and small offerings (12-months period aggregate amount not exceeding USD 1 million)[163].

Under the CF, the issuer can raise a maximum aggregate amount of USD 5 million within the 12-month period with a limited investment from an individual non-accredited investor, and the

[156] *See* Sec. 5 of the Securities Act (n 61).
[157] *See* ibid Sec. 7 and 10.
[158] Art. 3 and 6 of Prospectus Regulation (n 125).
[159] "The public solicitation of orders for a PRIMARY OFFERING before REGISTRATION is complete." – Black's Law Dictionary 2nd edn, 'GUN JUMPING Definition & Legal Meaning' <https://thelawdictionary.org/gun-jumping/> accessed 12 June 2023.
[160] *See* Sec. 5(c) and 5(b)(1) of the Securities Act (n 61); Art. 3(1) and 22 of Prospectus Regulation (n 125).
[161] *See* Sec. 3-4 of the Securities Act (n 61).
[162] ibid Sec. 4(a)(5).
[163] ibid Sec. 4(a)(6)(A).

offering must take place online through an SEC-registered intermediary.[164] By removing the registration requirement, the CF helps issuers to reduce regulatory costs[165] as well as subject them to a little bit less strict disclosure requirements.[166] Reg A+ has two offering tiers: Tier 1 for offering of up to USD 20 million and Tier 2 for offerings of up to USD 50 million.[167] It is also mostly beneficial for regulatory costs' reduction, while the disclosure requirements remain, although relaxed.[168] Reg D represents the private placement exemption and provides for exemptions under the following three rules: Rule 506(b), Rule 506(c) and Rule 504. The first rule allows the issuer to raise an unlimited amount of capital from an unlimited number of accredited investors and up to 35 other investors, but the securities may not be freely traded on the secondary market as well as the issuer cannot use general solicitation.[169] Rule 506(c) is different in terms that it allows for the general solicitation, but all investors must be accredited, which must be reasonably checked by the issuer.[170] Rule 504 exemption is applicable to limited offerings not exceeding USD 10 million over the 12-month period.[171] Reg S covers offshore offers of securities to the foreign investors (of one particular country) and can be used as supplement for, e.g., Reg D exemption.[172]

[164] SEC, 'Regulation Crowdfunding' (modified on 5 May 2023) <https://www.sec.gov/education/smallbusiness/exemptofferings/regcrowdfunding> accessed 10 June 2023.
[165] *See* Sec. 6(b) of the Securities Act (n 61).
[166] *See* Sec. 227.201-227.206 of the Code of Federal Regulations (CFR), 1996 to Present (Regulation Crowdfunding, 2015) (US).
[167] SEC, 'Regulation A' (modified on 6 April 2023) <https://www.sec.gov/education/smallbusiness/exemptofferings/rega> accessed 10 June 2023.
[168] *See* SEC, 'Amendments to Regulation A: A Small Entity Compliance Guide' (modified on 4 February 2019) <https://www.sec.gov/info/smallbus/secg/regulation-a-amendments-secg#3> accessed 10 June 2023.
[169] SEC, 'Private placements - Rule 506(b)' (modified on 6 April 2023) <https://www.sec.gov/education/smallbusiness/exemptofferings/rule506b> accessed 10 June 2023.
[170] SEC, 'General solicitation – Rule 506(c)' (modified on 6 April 2023) <https://www.sec.gov/education/smallbusiness/exemptofferings/rule506c#:~:text=Rule%20506(c)%20permits%20issuers,in%20Regulation%20D%20are%20satisfied> accessed 10 June 2023.
[171] SEC, 'Exemption for limited offerings not exceeding $10 million—Rule 504 of Regulation D' (modified April 6 2023) <https://www.sec.gov/education/smallbusiness/exemptofferings/rule504> accessed 10 June 2023.
[172] *See* ManhattanStreetCapital, 'What is Reg S or Regulation S?' <https://www.manhattanstreetcapital.com/faq/for-fundraisers/what-reg-s-or-regulation-s> accessed 10 June 2023.

The EU has very similar exemptions, but they all are contained in the MiFID II unlike in the US, where the SEC issues separate regulations. The exemptions that could be applicable to SME issuers also include offers to qualified (accredited) investors and small offers (total consideration is less than EUR 1 million over a period of 12 month; denomination of each security is at least EUR 100 000 or each investor spends at least EUR 100 000; addressed to less than 150 non-qualified investors).[173]

Additionally, MiCA establishes disclosure requirements specifically for crypto asset issuers. According to the Regulation, issuers of security-utility tokens (other than asset-references or e-money) must draw up a *white paper*[174] instead of a *prospectus*.[175] Although the disclosure document bears a different name, it has the same substance as a prospectus. Main difference consists of the white paper requirement to disclose information about the underlying technology, including DLT, protocols, and technical standards used.[176] MiCA also provides for the similar exemptions from the white paper obligation: private placement (only qualifies investors) and small offering (less than 150 investors or less than EUR 1 million to be raised within 12 months). It is worth mentioning that the language used in MiCA is less complex compared to the Prospectus Regulation as well as more emphasis is being put on disclaimers about the risks associated with crypto assets.[177] The text of the Regulation can be easily understood by the crypto issuers, and it aims at protecting investors from the scams previously highly associated with ICOs.

In both jurisdictions, the offering usually must be conducted with the involvement of authorized intermediaries, such as underwriters, investment banks, brokers and/or funding

[173] *See* Art. 1(4) Prospectus Regulation (n 125).
[174] White paper is a document that usually accompanies the token offering and contains information about the issuer, its business, token and/or underlying DLT platform. White papers in token offerings became a wide-spread practice. – *See, e.g.*, Maume (n 10) 190; Mendelson (n 2) 88-89.
[175] Art. 4(1)(b)of MiCA (n 13).
[176] ibid Art. 6(1)(h).
[177] ibid Art. 6(3)-(7).

portals in case of the US[178], and banks, regulated markets (national stock exchanges), investment firms and/or CASPs in case of the EU.[179] However, intermediaries are not required by law under some exemptions from securities registration (e.g., under the CF or private placement exemptions in the EU). It can be difficult to offer security tokens through 'conventional' intermediaries as banks, brokers, and investment firms, since they may lack the technological aspect necessary for crypto asset distribution and transaction recording. On the other hand, STOs in the US tend to make use of the exemptions from registration requirements and hence avoid conventional intermediaries.[180] European issuers also may avoid intermediaries by applying for exemptions, but DLT Pilot Regime and MiCA made intermediaries more appropriate for STOs (DLT trading venues and CASPs).

To sum up, the US system offers a wider variety of exemptions from securities registration that could be used by crypto assets issuers. On the other hand, the EU enacted a very 'user-friendly' legislative instrument that lays down all the requirements in a clear manner. Both jurisdictions provide for an opportunity to avoid intermediaries in STOs by means of exemptions from registration, but the EU has made a step further and tried to adopt intermediaries that could be involved in order to make an offering technically possible and at the same time regulated. Although the success of such incentives cannot be determined yet, the situation with authorized intermediaries promises to be better in the EU, while in the US still "none of the major crypto asset entities is registered with the SEC as a broker-dealer, exchange, or investment adviser".[181] Also, in the EU, less tokens would qualify as securities under MiFID II and more as tokens, other than asset-referenced tokens or e-money tokens, which means that most issuers would be

[178] *See, e.g.,* Sec. 4A(a) and Schedule A (5) and (28) of the Securities Act (n 61).
[179] *See, e.g.,* Art. 3 Prospectus Regulation (n 125); Art. 5 of MiCA (n 13); Art. 4 of of the Law on dematerialised securities (LU) (n 141).
[180] *See* RealT and SEC (n 147).
[181] SEC, 'Exercise Caution with Crypto Asset Securities: Investor Alert' <https://www.sec.gov/oiea/investor-alerts-and-bulletins/exercise-caution-crypto-asset-securities-investor-alert> accessed 12 June 2023.

subject to sector-specific regulation (MiCA) rather than securities regulation. However, issuers must recognize that the difference between securities law and new crypto assets requirements is not that significant.

3.3. Limitations

This subsection covers territorial, investor and age restrictions applicable to the offerings in the US and the EU. However, it also addresses the availability and efficiency of shelf registration, since the lack of this process or its inefficiency may lead to some difficulties or slowdowns (akin 'limitations') in the offering process. Moreover, this is rather an option of the issuer than a requirement.

Shelf registration, which allows issuers to register various rounds of securities offering in advance, is possible in the US under the SEC Rule 415.[182] Additionally, this process is relaxed for well-known, seasoned issuers by automatic shelf registration.[183] In the EU, similar mechanism was adopted within the Prospectus Regulation – a universal registration document.[184] In terms of efficiency, the US system stands out by not mandating the regulator's approval for a prospectus supplement that supplements a shelf, while also permitting forward incorporation by reference to future reports.[185]

Securities offerings have some territorial limitations as they cannot be completely international due to the registration requirements in every state. To be more precise, physically they can be international by being marketed via internet, however, in order for them to be fully legal, they

[182] *See* Coffee et al. (n 26) 161-164.
[183] ibid 169.
[184] *See* Art. 9 of Prospectus Regulation (n 125).
[185] Dorothee Fischer-Appelt, 'Reforming EU Securities Laws: The New EU Prospectus Regulation' (*GT Law*, 28 June 2017) <https://www.gtlaw.com/en/insights/2017/6/reforming-eu-securities-laws-the-new-eu-prospectus-regulation> accessed 9 June 2023.

must comply with all local registration requirements. Territorial limitations in this context should be understood as prohibition to solicit and sell securities in other countries, where they are not registered. Solicitation, in practice, is the determining factor for assessing such securities laws violations, since an occasional sale of security might happen when a citizen of country A randomly finds the offering of securities registered in country B, although the offering was not marketed in country A (e.g., was in different language and/or inaccessible from country's B IP-addresses), and this would likely not be considered as a violation.[186]

In the US, once the securities are registered with the SEC, they can be offered across all states.[187] Solicitation of the offering outside of the US must be in accordance with local securities laws and regulations, i.e., the securities must be registered with all relevant authorities where the security is being marketed. Reg S, that allows issuers to target non-US non-accredited investors without the SEC registration, may seem to loosen territorial limitations, however, the issuers must still comply with the laws of the targeted country.[188] Various limitations apply to issuers who file for exemptions from registration, but these are discussed in the details in the next Section.

In the EU, based on the principle of mutual recognition, issuers are subjects to the 'passport' regime, i.e., the prospectus approved in one Member State is valid in other Member States too.[189] That resembles the US federal registration to some extent but with additional notification requirements.[190] However, issuers should take into account the fact that the threshold below which a prospectus is not required may be lower in some Member States. That entails that STOs between EUR 1 million and EUR 8 million do not benefit from the

[186] Whitehead (n 154).
[187] *See* preambular of the Securities Act (n 61).
[188] *See* the SEC Rule 902(j) under the Securities Act.
[189] *See* Art. 24 of Prospectus Regulation (n 125).
[190] *See* ibid Art. 25.

passporting regime in such Member States that retain the threshold of EUR 1 million.[191] In any case, the offering of security tokens in third countries requires the compliance with local registration and disclosure requirements.

Finally, both jurisdictions impose some territorial restrictions due to sanctions. One of the most recent examples would be sanctions against Russia and Belarus.[192] Additionally, usually only adults over the age of 18 are allowed to participate in offerings, although the burden of complying with this restriction usually lies with exchanges and brokerage or investment firms.[193] Disclaimers are often employed to mitigate the risk of targeting residents of those countries, where the securities were not registered. They were even recommended by the EU legislators at some point[194], however, jurisdictional disclaimers do not limit legal liability of the issuer.[195] It is worth mentioning that oracles, mentioned in the previous Chapter, could be employed to comply with applicable territorial and age restrictions.[196]

[191] Maume (n 10) 196.
[192] *See, e.g.,* Council Regulation (EU) 2022/328 amending Regulation (EU) No 833/2014 concerning restrictive measures in view of Russia's actions destabilising the situation in Ukraine [2022] OJ L 49; Council Regulation (EU) 2022/398 amending Regulation (EC) No 765/2006 concerning restrictive measures in view of the situation in Belarus and the involvement of Belarus in the Russian aggression against Ukraine [2022] OJ L 82; US Department of the Treasury, 'U.S. Treasury Announces Unprecedented & Expansive Sanctions Against Russia, Imposing Swift and Severe Economic Costs' (24 February 2022) <https://home.treasury.gov/news/press-releases/jy0608> accessed 10 June 2023.
[193] *See, e.g.,* Brandon Michael, 'How Old Do You Have To Be To Invest In Stocks?' (*Nasdaq*, 31 January 2021) <https://www.nasdaq.com/articles/how-old-do-you-have-to-be-to-invest-in-stocks-2021-01-31> accessed 10 June 2023.
[194] Art 6(3) of the Commission Delegated Regulation (EU) 2016/301 supplementing Directive 2003/71/EC of the European Parliament and of the Council with regard to regulatory technical standards for approval and publication of the prospectus and dissemination of advertisements and amending Commission Regulation (EC) No 809/2004 [2015] OJ L 58.
[195] Art. 21(4) Prospectus Regulation (n 125).
[196] *See* Benedetti and Rodriguez-Garnica (n 48).

CONCLUSION

Advantages of STOs over IPOs turn out to be not as significant as some researchers and market participants claim them to be. In reality, STOs are subject to the same regulation as offerings of securities and thus, the same regulatory costs and requirements. Only under MiCA can issuers achieve some time and cost efficiency compared to conventional IPOs. Otherwise, issuers may also increase efficiency by applying for exemptions from securities registration. However, this option is similarly available to the issuers of conventional securities. Thus, from a legal perspective, fully compliant STOs are unlikely to be less expensive or time-consuming as compared to IPOs and other securities offerings.

One of the important insights of this Thesis is that there is a difference between security tokens and tokenized securities. Security tokens represent a larger group of crypto assets, and tokenized securities, that are, in principle, conventional securities recorded on a blockchain, fall into this group. However, there can be also other types of security tokens, such as mixed products that provide both utility or consumption rights and rights similar to those attached to securities.

Understanding this difference is crucial in light of a different treatment of security tokens that are not tokenized securities in the US and the EU. Tokenized securities, i.e., crypto assets that practically mirror the conventional securities to the full extent, are subject to securities regulation in both jurisdictions. Security tokens with a consumption element, on the other hand, are regulated under securities laws in the US and the sector-specific regulation MiCA in the EU. At the same time, utility tokens, i.e., crypto assets that are intended purely for consumption purposes or where the investor's 'primary' motive is consumption, are excluded from the scope of securities and sector-specific regulation in both jurisdictions. However, the SEC's practice shows that it is rare for crypto assets offered to the public to have purely consumption purposes,

even if they are called utility tokens by the issuer itself. Hence, the majority of offered crypto assets would be considered securities in the US and mixed products under Title II of MiCA in the EU.

The research question cannot be answered by providing just one preferrable jurisdiction, since STOs are heavily regulated in both jurisdictions, and each have their advantages and disadvantages. Thus, issuers must choose a jurisdiction for their STO wisely by taking into account the nature of a crypto asset, target amount to be raised and preferences as to the number and nature of investors.

The US would be more suitable for those issuers seeking a wider variety of exemptions from registration requirements, under which they could still raise higher amounts than in the EU (USD 10, 20 and 50 million compared to EUR 8 million or even less). Issuers willing to make use of a shelf registration should also consider the US over the EU, as this procedure is more efficient there. The US also provides the issuers with the benefit of a federal registration system, which allows to market securities across the whole country, while in the EU there are additional notification requirements and possible issues with different prospectus thresholds.

The EU, on the other hand, is better suited for the issuers of mixed security tokens that also have features of utility tokens as the regulation of those (MiCA) is at least partially less strict, which can help with time and/or cost efficiency. MiCA still resembles securities regulation in its structure and objectives (e.g., investor protection) and lays down very similar disclosure requirements, so the advantages of MiCA over MiFID II and Prospectus Regulation are not extreme. Moreover, it must be noted that the success of MiCA cannot be measured yet, and there is a chance that some NCAs will fail to manage the registration process efficiently, while the SEC is at least a well-established institution with well-established practices and processes.

With regards to further research, the author recommends extending the scope of the comparison of STO regulations to other jurisdictions, such as, e.g., Cayman Islands and Singapore, and other applicable requirements, such as, e.g., disclosure and transparency requirements under insider trading rules. This Thesis covered only two jurisdictions and only disclosure and intermediary related requirements. Moreover, it is recommended to reassess STOs regulation in a few years, when MiCA will be already applicable, since then it would be possible to observe the practice of the NCAs. Finally, further research could be interdisciplinary by comparing STOs and conventional capital raising methods from a deeper technological perspective in addition to the legal one. A technological perspective would represent the technological process of security tokens' creation (minting) and distribution as well as the process of the attached rights' enforcement.

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