MASTER THESIS

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„ The regulatory framework for crypto assets: a comparative study under EU and U.S. law “

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Abstract (English)

Crypto assets have entered the financial system and with it several risks that financial institutions never had to deal with. As such, since the first crypto currency, Bitcoin, emerged in 2008, the different jurisdictions have started to turn their attention to this asset type and tackle the associated risks with regulatory efforts.

The present study compares the regulatory solutions adopted by the European Union and the United States in certain sectors. The cross border impact of crypto currencies is mirrored in the approaches chosen by the regions, which have had to extend the application of existing legislation or produce new ones to adequately address the issues. The outlook into the topic indicates that both the EU and the U.S. will increasingly engage in efforts to foster certainty on the legal treatment awarded to this asset type.

Abstract (German)

Krypto-Vermögenswerte sind Teil des Finanzsystems geworden und haben so auch eine Reihe von Risiken gebracht, mit denen Finanzinstitute bisher nicht konfrontiert waren. Nach dem Aufkommen der ersten Kryptowährung, Bitcoin, im Jahr 2008 haben die verschiedenen Rechtsordnungen begonnen, ihre Aufmerksamkeit auf derartige Vermögenswerte zu richten und die damit aufkommenden Risiken mit regulatorischen Maßnahmen zu bekämpfen.
Die vorliegende Untersuchung vergleicht die in bestimmten Sektoren verabschiedeten Regulierungslösungen der Europäischen Union und den Vereinigten Staaten. Der grenzüberschreitende Einfluss von Kryptowährungen spiegelt sich in den von den Regionen gewählten Ansätzen wider, die die Anwendung bestehender Gesetze ausweiten oder neue Gesetze schaffen mussten, um die neu aufkommenden Probleme angemessen anzugehen. Der folgende Ausblick deutet darauf hin, dass sowohl die EU als auch die USA zunehmend Anstrengungen unternehmen werden, um für die Behandlung dieser Vermögenswerte die Rechtssicherheit zu fördern.

Abbreviation list

(AML) Anti-Money Laundering

(ART) Asset-referenced tokens

(BOI) Beneficial Ownership Information

(BSA) Bank Secrecy Act

(CASPs) Crypto-Asset Service Providers

(CBDC) U.S. Central Bank Digital Currencies

(CDD Rule) Customer Due Diligence Rule

(CEA) Commodity Exchange Act

(CESR) Committee of European Securities Regulators

(CFTC) Commodity Futures Trading Commission

(CSD Regulation) Central Securities Depositories Regulation

(CTA) Corporate Transparency Act

(CTF) Counter Terrorism Financing

(DAC8) Directive on Administrative Cooperation

(DLT) Distributed Ledger Technology

(EBA) European Banking Authority

(EC) European Commission

(EMD) E-Money Directive

(EMT) E-money tokens

(ESMA) European Securities and Markets Authority

(FinCEN) Financial Crimes Enforcement Network

(FIUs) Financial Intelligence Units

(FSB) Financial Stability Board

(GDP) Gross Domestic Product

(ICOs) Initial Coin Offerings

(IMF) International Monetary Fund

(IOSCO) International Organization of Securities Commissions

(IRS) Internal Revenue Service

(KYC) Know-Your-Customer

(MiCA Regulation) Markets in Crypto-Assets Regulation

(MiFIR) Markets in Financial Instruments Regulation

(NCAs) National Competent Authorities

(OCC) Office of Comptroller of the Currency
(PSD2) Payment Services Directive 2
(SEC) Securities and Exchange Commission
(SEF) swap execution facilities
(VASPs) Virtual Assets Service Providers
(VAT) Value-Added Tax
(TFR) Transfer of Funds Regulation

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1. Introduction

In recent years, a new investment product has been in the spotlight: crypto assets, also known as crypto currencies. This type of asset is mainly known for its extremely high volatility, associated with its dependence on market speculation, potentially leading investors to very high returns, or substantial losses. The novelty associated with crypto-assets, combined with the speculation taking place on online platforms and social media, has attracted many inexperienced investors and a younger generation.

As this product is, by nature, linked to the intangible world, many questions arise about its safety. The concrete reality of this type of asset is not easily grasped, generating a lot of uncertainty. Not only that, but the lack of concrete regulations leads to the lack of trust on these investments.

Faced with the growing interest in crypto currencies, countries and governments have increasingly found the need to regulate it, as a way to tackle the arising issues. However, as stated by authors Nikos Daskalakis and Panagiotis Georgitseas, "regulating the new crypto market ecosystem is not an easy task".[1]

Focusing on two very important markets, the European Union and the United States of America, this Master Thesis will provide a comparative overview of the regulatory framework of crypto assets. This work proceeds with a comparative analysis regarding the current treatment awarded to digital assets in terms of its classification, tax treatment and implementation of AML and CTF rules, as well as the outlook of the expected future legal framework.

As will be the conclusion of this study, the cross-border reach of crypto currencies also impacts the regulatory efforts surrounding it. The two regions under analysis have made considerable advances in establishing a clear framework for this new asset type and have evolved at a similar pace. The different jurisdictions recognize the need for international cooperation in this situation and have thus followed the recommendations and advices provided by international financial entities. This resulted in having similar priorities, such as establishing adequate AML and CTF rules and

[1] Nikos Daskalakis and Panagiotis Georgitseas, *An Introduction to Cryptocurrencies: The Crypto Market Ecosystem* (1st edn Routledge 2020) 8.

defining the tax treatment applicable to these assets. For other matters, as advanced by some authors, governments struggle to properly regulate the use of crypto assets, leaving investors exposed to several risks and allowing black markets to proliferate.[2]

The present study finally agrees that the outlook of the regulatory developments in both regions seems promising, with concrete developments being expected in the near future, but introducing divergent approaches. If the situation follows the expected course, the European Union seems to be approaching a regulatory framework that completely recognizes and welcomes crypto assets into its financial system, by means of a ground-breaking regulation. The United States, on the other hand, is equally aware of the established position crypto assets have achieved within the financial sector, however no comprehensive legislation is expected, not allowing a clear view into what is to come. The situation in America is aggravated by the fact that political tendencies of the sitting President may overturn current developments.

2. Introduction to crypto-assets

"Crypto-assets", "crypto-currencies", "digital gold", "gold 2.0" - many names to refer to one product. As pointed out in *Crypto-assets - Key developments, regulatory concerns and responses*[3], it is common to find the use of terms such as "virtual currencies", "coins", "digital currencies" or "digital assets" as a reference to crypto-assets.

Despite the different denominations, the definition of crypto-assets is not completely clear. As this will prove itself as a rather complex product, an initial basic understanding of what it encompasses is of paramount importance.

This type of asset is deeply connected with technology and, since its genesis in 2008, has extensively evolved.

This chapter focuses on the essential elements of crypto-assets, which must be understood in order to proceed with the comparative study at hand. An analysis of the basics, such as definition and origin, are presented first, followed by an enumeration of the main legal issues. Lastly, an overview of two examples that illustrate how crypto-assets may be adopted by countries.

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[2] Rehana Parveen and Alanoud Alajmi, 'An Overview of Bitcoin's Legal and Technical Challenges' (2019) 22(1) Journal of Legal, Ethical and Regulatory Issues 1, 1 <www.abacademies.org/articles/An-overview-of-bitcoins-legal-and-technical-challenges-1544-0044-22-S1-265.pdf> accessed 24 January 2022.

[3] Robby Houben and Alexander Snyers, *Crypto-assets: Key developments, regulatory concerns and responses* (European Parliament, April 2020) 19.

2.1. Definition

The term crypto-assets has been awarded several definitions and used to indicate several assets. Looking first at the dictionary's definition of cryptocurrency, the term is classified as "any form of currency that only exists digitally, that usually has no central issuing or regulating authority but instead uses a decentralized system to record transactions and manage the issuance of new units, and that relies on cryptography to prevent counterfeiting and fraudulent transactions".[4]

Some authors simplify it by referring to it as "digital currencies that represent value or assets within a network".[5] It is common to find that different entities define it in distinct ways according to the type of monitoring work they perform, as gathered by the Directorate-General for Internal Policies of the European Parliament.[6]

The European Central Bank Crypto Assets Task Force, established in 2018 with the purpose of developing the knowledge about crypto-assets, proposed a very restrictive definition: "any asset recorded in digital form that is not and does not represent either a financial claim on, or a financial liability of, any natural or legal person, and which does not embody a proprietary right against an entity".[7]

Distinctly, the International Organization of Securities Commissions (IOSCO), created with the aim of building global standards for the securities sector, defines crypto-assets as "a type of private asset that depends primarily on cryptography and DLT[8] or similar technology as part of its perceived or inherent value, and can represent an asset such as a currency, commodity or security, or be a derivative on a commodity or security".[9]

In contrast, the Financial Stability Board (FSB), an international body monitoring the global financial system, puts forth that crypto-assets are a "type of private asset that depends primarily on

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[4] *Merriam-Webster* <www.merriam-webster.com/dictionary/cryptocurrency> accessed 26 January 2022.

[5] Daskalakis and Georgitseas (n 1) 76.

[6] Houben and Snyers (n 3) 18.

[7] European Central Bank Crypto-Assets Task Force, *Crypto-Assets: Implications for financial stability, monetary policy, and payments and market infrastructures* (Occasional Paper Series No 223, May 2019) 7.

[8] DLT - Distributed Ledger Technology: refers to the technological infrastructure and protocols that allows simultaneous access, validation, and record updating in an immutable manner across a network that's spread across multiple entities or locations (Jake Frankenfield, 'Distributed Ledger Technology (DLT)', *Investopedia* <www.investopedia.com/terms/d/distributed-ledger-technology-dlt.asp> accessed 23 January 2022).

[9] Board of the International Organization of Securities Commissions, *Issues, Risks and Regulatory Considerations Relating to Crypto-Asset Trading Platforms: Final Report* (FR02/2020) 1.

cryptography and distributed ledger or similar technology as part of their perceived or inherent value".[10]

Similarly to FSB, the European Securities and Markets Authority (ESMA), an independent body of the European Union which promotes investor's protection as a way to safeguard the stability of the financial system of the EU, identifies crypto-assets as "a type of private asset that depends primarily on cryptography and Distributed Ledger Technology".[11]

In line with the two prior definitions, the European Banking Authority (EBA), whose role is to create a single regulatory and supervisory framework for the EU banking sector, designates crypto-assets as a private asset primarily depending on cryptography and using distributed ledger technology as an essential element of their value.[12]

Taking into account the aforementioned descriptions, the study presented by the Directorate-General for Internal Policies of the European Parliament goes further and adds on to the definition built by the EBA. According to this publication, crypto-assets are private digital assets that are 1. recorded on a type of DLT and safeguarded by cryptography, 2. independent from a central bank or public authority and 3. susceptible to being used as means of exchange or investment, or as access to a good-service.[13]

Considering the preceding descriptions, there are two main common characteristics found between the different proposals. Firstly, the recurring reference to cryptography and DLT, implies this is an essential element. Secondly, a constant reference to "private asset", underlies its independence from any financial institution.

Nonetheless, it is important to note that under the scope of these definitions of crypto-assets there are multiple assets, and are not limited to crypto-currencies.

To name a few, in the aforementioned EBA report, there is a clear mention of a wide range of assets, such as payment/exchange tokens, investment tokens and utility tokens. Under the scope of IOSCO's definition, currencies, commodities, securities or the respective derivatives are included. In a similar manner, ESMA identifies a range of crypto-assets including not only crypto-currencies, but also digital tokens issued via Initial Coin Offerings (ICOs). ICOs are the equivalent

[10] Financial Stability Board, *Crypto-assets: Work underway, regulatory approaches and potential gaps* (2019) 10.
[11] European Securities and Markets Authority, *Advice: Initial Coin Offerings and Crypto-Assets* (ESMA50-157-1391, 2019) 4.
[12] European Banking Authority, *Report with advice for the European Commission on crypto-assets* (2019) 4.
[13] Houben and Snyers (n 3) 19.

to an initial public offering for the crypto industry, as a means to raise funds.[14] ICOs are generally done through the issuance of tokens which can only be used within a certain platform.

In a simplified manner, the Directorate-General for Internal Policies of the European Parliament divides the different crypto-assets into two groups: *coins* (or crypto-currencies) and *tokens*.[15]

On one side, coins are meant to fulfil the same purposes as currencies do, meaning, act as a medium of exchange. On the opposite side, tokens represent economic, governance, utility or consumption rights. Moreover, tokens are usually issued within a platform or blockchain as a way to raise capital for funding or development.

As will be deeply analysed in chapter 2.2. below, crypto-currencies, namely *Bitcoin*, were the first type of crypto-assets to be created. The emergence of tokens was only registered later, in 2017, but will not be touched upon by this study.[16]

2.2. Origin

The origin of crypto-currencies goes back to 2008 and is entirely linked to the creation of the first digital coin: *Bitcoin*.

As described in the book *An Introduction to Cryptocurrencies: The Crypto Market Ecosystem*[17], the creation of *Bitcoin* was announced by the white-paper *Bitcoin: A Peer-to-Peer Electronic Cash System*[18], in October 2008. The piece was published by Satoshi Nakamoto, whose true identity remains unknown to this day.

According to Satoshi Nakamoto, Bitcoin is designed as "a purely peer-to-peer version of electronic cash [that] would allow online payments to be sent directly from one party to another without going through a financial institution".[19]

Furthermore, Satoshi argues that Bitcoin comes as a response to the flawed online commerce, suffering from the "inherent weaknesses of the trust based model", which always requires the intervention of a trusted third party.[20] Online transactions require processing of payments and are, therefore, practically entirely dependent on financial institutions.

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[14] Jake Frankenfield, 'Initial Coin Offering (ICO)' (*Investopedia)* <www.investopedia.com/terms/i/initial-coin-offering-ico.asp> accessed 23 January 2022.
[15] Houben and Snyers (n 3) 21.
[16] ibid 21.
[17] Daskalakis and Georgitseas (n 1) 71.
[18] Satoshi Nakamoto, *Bitcoin: A Peer-to-Peer Electronic Cash System* (2008).
[19] ibid 1.
[20] ibid.

For the author, the solution encompasses shifting to a system which allows autonomous direct transactions between any two parties, relying on cryptographic proof, instead of trust in a financial institution.

The electronic system on which *Bitcoin* relies, entails two major features. The first, in a simplified manner, is the impossibility to reverse a transaction. According to its creator, this aspect makes Bitcoin a safer option for both sellers and buyers. The first would be shielded from fraudulent attempts, while the latter could easily benefit from added protection via escrow mechanisms.[21] The second main component is the mechanism employed to fight the double-spending problem. Double-spending is the possibility to use the same unit of a currency twice, for different payments, therefore damaging the trust in such types of assets and destroying the foundations on which the blockchain technology is built.[22]

Satoshi proposes a peer-to-peer server, which provides a timeline of all transactions and guarantees verifiability of when each transaction occurred - the so-called blockchain technology.

The emergence of Bitcoin is linked to the use of blockchain technology, however the mechanicals of this technology will not be analysed, as those fall outside the scope of the present study.

As proposed by Bitcoin's creator and the authors of the above mentioned book - *An Introduction to Cryptocurrencies: The Crypto Market Ecosystem*, the blockchain technology has the ability to operate without the need of a trusted third party, namely financial institutions, and still tackle the potential trust issues and the double-spending problem.

Since the creation of Bitcoin, several other crypto currencies have followed. This was mainly due to the success that the blockchain technology registered. Subsequently this technology evolved and smart-contracts were introduced by the *Ethereum* platform, as described by N. Daskalakis and P. Georgitseas. Smart contracts are produced automatically by an autonomous computer when the performance of a party's contractual obligations is fulfilled, without the need of the same peer-to-peer control as before.

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[21] Escrow: a deed, a bond, money, or a piece of property held in trust by a third party to be turned over to the grantee only upon fulfillment of a condition. 'Escrow' (*Merriam-Webster)* < www.merriam-webster.com/dictionary/escrow> accessed 24 January 2022.

[22] 'What is double spending and why is it such a problem' (*Bitpanda Academy*) <www.bitpanda.com/academy/en/lessons/what-is-double-spending-and-why-is-it-such-a-problem/> accessed 24 January 2022.

Currently, the number of crypto currencies goes well beyond just Bitcoin and Ethereum, reaching an approximate number of 9.900 in January 2022.[23] Image 1, found in the Annex, illustrates precisely the exponential growth in the number of registered coins from 2013 until the beginning of 2022.

2.3. Main legal issues

As part of the introduction to crypto assets, one cannot overlook the main legal issues associated with this product. There are several aspects which could be analysed under this section, however the focus will be on the most commonly referred ones, according to the relevant literature used.

2.3.1. Lack of trust in crypto assets

First and foremost, there are trust issues associated with the lack of regulation. As pointed out by Satoshi Nakamoto himself, the processing of electronic payments in online commerce, up to 2008, relied almost entirely on financial institutions acting as trusted third parties.[24] This means that, up to that point in time, financial institutions were guaranteeing that the money was getting from one end to the other, providing a sense of trust in the transaction.

As pointed out by N. Daskalakis and P. Georgitseas, without trust, there is a real risk that the entire financial system might collapse.[25]

Since the appearance of Bitcoin, the level of trust on crypto assets has increased. This happened mainly due to its mainstream acceptance, not only from investors and businesses, but also some countries, as will be shown on chapter 2.4. Nonetheless, despite the growing acknowledgement, there are still many national governments fighting crypto currencies.

As identified in the paper *An Overview Of Bitcoin's Legal And Technical Challenges*, the main factor leading to distrust in digital coins is the lack of a centralized authority, in charge of monitoring transactions and combating cyber-attacks.[26]

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[23] 'Number of cryptocurrencies worldwide from 2013 to January 2022' (*Statista Inc.*, 2022) <https://www.statista.com/statistics/863917/number-crypto-coins-tokens/> accessed 24 January 2022.
[24] Nakamoto (n 18) 1.
[25] Daskalakis and Georgitseas (n 1) 72.
[26] Parveen and Alajmi (n 2) 1-8.

2.3.2. Cybersecurity and issues arising out of anonymity

The anonymity of users, seeded in blockchain technology, leads to dangerous threats. Powered by the lack of protection of investors and the rise of black market websites, offering users the possibility to pay anonymously with crypto currencies, leads to increasing risks of theft, fraud and money laundering.

Regarding the use of Bitcoin for illegal means or ends, the paper mentions how the Silk Road case linked Bitcoin to illicit transactions. The Silk Road was an online black market platform, launched in 2011, which became known for its use of Bitcoin to foster illegal transactions connected to drug trafficking and money laundering. In 2013, the FBI was able to shut down the platform and the founder, Ross William Ulbricht, was prosecuted and charged with a life sentence.[27] Bitcoin was deliberately chosen to be the means of exchange within the platform due to the ability to cover up true identities and locations of the users.[28]

Another concern, connected to cybersecurity, is data breaches and cyber-attacks. One of the prime examples is the Mt. Gox case, as indicated by the authors of the paper. As described by Forbes, Mt. Gox was a Japanese company responsible for bitcoin exchanges. In February 2014, the company shut down its website and services after realizing it had been a victim of a cyber-attack, leading to the disappearance of around $450.000.000 (at the time) in Bitcoin. The case ended with the prosecution of the company's CEO, charged with fraud and embezzlement. Nonetheless, the case stained Bitcoin's reputation in Japan.[29]

Both data theft and financial fraud lead to serious concerns regarding the use of blockchain technology, which enables anonymity. Researchers have found security defects in Ethereum blockchain that exposed $250 million to the possibility of theft. The same source adds that Ledger, a crypto wallet maker, faced an enormous data security breach. One million email addresses were at risk and personal information of 9,500 customers was stolen.[30]

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[27] Jake Frankenfield, 'Silk Road (Website)' (*Investopedia*) <www.investopedia.com/terms/s/silk-road.asp> accessed 24 January 2022.

[28] U.S. Attorney's Office, 'Ross Ulbricht, the Creator and Owner of the Silk Road Website, Found Guilty in Manhattan Federal Court on All Counts' (*FBI*, 5 February 2015) <www.fbi.gov/contact-us/field-offices/newyork/news/press-releases/ross-ulbricht-the-creator-and-owner-of-the-silk-road-website-found-guilty-in-manhattan-federal-court-on-all-counts> accessed 24 January 2022.

[29] Ken Yagami, 'Japan: A Forward Thinking Bitcoin Nation' *Forbes* (2 November 2017) <www.forbes.com/sites/outofasia/2017/11/02/japan-a-forward-thinking-bitcoin-nation/> accessed 24 January 2022.

[30] 'Legal Issues Surrounding Cryptocurrency' (*Freeman Law*) <https://freemanlaw.com/legal-issues-surrounding-cryptocurrency/> accessed 24 January 2022.

It is also important to note, crypto investors are specially subject to hacker attacks when using custody services to store their private keys.[31] The loss of a user's private keys, results in total inaccessibility to the funds. Lamentably, these situations are becoming more common with the increase of cyber-attacks. As can be seen on image 2 provided in the Annex, in 2018 the value of funds lost to cybercrime, has reached over $800 million.

As shown, the concerns surrounding cybersecurity have major importance. Anti-Money Laundering efforts are also pressing legal issues, which find its source in the anonymity provided by the blockchain. Nonetheless, as both the European Union and the U.S.A. have taken extensive measures to fight this type of financial crime, AML rules will be analysed separately, in a dedicated chapter.

2.3.3. Valuation of crypto assets

Another major issue is how to measure the value of crypto assets. "Valuation is the analytical process to determine how much something is worth".[32] Using this definition as a starting point, it is possible to conclude that for crypto assets, whose purpose is to be used as currency, determining their value is of utmost importance.

As pointed out in *Cryptoassets: Legal, Regulatory, and Monetary Perspectives*, the crucial differences separating crypto assets from financial assets are, on one hand, the dilemma surrounding its definition, as shown on chapter 2.1, and on the other hand, the challenges to evaluate these assets.[33] Following this argumentation line, other authors suggest that the high volatility associated with crypto currencies leads to major uncertainty regarding the possibility to use it as currency. Moreover, these authors add that due to the limited investors community, when compared with conventional currencies, the value of any crypto asset can be greatly affected by a small event or trade.

There are several mechanisms to measure the value of traditional financial assets, which will not be analysed, as they fall out of the scope of the present study. It is, however, relevant to mention that most of them cannot be used to determine the value of crypto assets. The same source underlines the difficulty to evaluate this asset type also due to the absence of a track record. It is further

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[31] Houben and Snvers (n 3) 62-63.
[32] Daskalakis and Georgitseas (n 1) 74.
[33] Chris Brummer, 'Cryptoassets: Legal, Regulatory, and Monetary Perspectives' (New York, Oxford University Press, 24 October 2019) 69-70.

added that researchers themselves are continuously working to pinpoint what are the main drivers of prices in this market sector, but the lack of a clear definition leads to little development.[34]
Nonetheless, several sources[35] claim that, like for most investment products, the price of crypto assets is determined by the basic economic principle of supply and demand. Taking Bitcoin as an example, the supply is limited to roughly 21 million bitcoins.[36]
Currently, as of January 2022, there are around 18.92 million Bitcoins in circulation, as shown on Image 3. Just like for gold supplies, the limited amount drives the demand. Bitcoin's website provides an explanation to "Why do bitcoins have value?", claiming that it comes from a combination of its utility as money and its reliance on mathematics rather than physical properties or trust in central authorities. Moreover, and of extreme relevance, is the argument that the value comes "only and directly from people willing to accept them as payment". The increasing number of investors, merchants and companies, especially start-ups, relying on Bitcoin, mirrors the increased trust, and therefore increased value.
Notwithstanding, Bitcoin's website warns of the high volatility associated with this digital currency. This is justified by the small market represented by this coin, which is easily affected by small amounts of money.
Despite the use of Bitcoin as reference, the same applies to the large majority of crypto currencies.

2.3.4. Different legal statuses

As previously shown on chapter 2.1., there is no uniform definition of crypto assets. Likewise, countries also define this asset type differently, which might influence its legal status.
Before diving into the specifics of this chapter, it is important to mention that the tax treatment of crypto assets is influenced by the legal status in each country. However, this subject will be deeply analysed further, in chapter 4, and will not be touched upon in the present section.
The aforementioned paper *An Overview Of Bitcoin's Legal And Technical Challenges*, underlines that due to the difficulty in defining this asset, countries also struggle to regulate it.[37] The paper focuses solely on Bitcoin, but will be used to draw conclusions for crypto currencies in general,

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[34] Daskalakis and Georgitseas (n 1) 75.
[35] Chrisjan Pauw, 'How Cryptocurrency Prices Work, Explained' (*Cointelegraph*, July 2018), <cointelegraph.com/explained/how-cryptocurrency-prices-work-explained > accessed 24 January 2022; 'Why do Bitcoins have value?' (*Bitcoin*) <bitcoin.org/en/faq#why-do-bitcoins-have-value> accessed 24 January 2022.
[36] '*How are Bitcoins created?*' (*Bitcoin*) <bitcoin.org/en/faq#how-are-bitcoins-created> accessed 24 January 2022.
[37] Parveen and Alajmi (n 2) 1-8.

for the purposes of this study. Generally, digital coins are designated as “currency”, due to the possibility to act as means of exchange.
Nonetheless, traditional currencies require issuance, usability and acceptance by a State or similar entity. Bitcoin, or crypto assets in general, do not register these elements. An additional issue is the lack of acceptance and legalization of Bitcoin by several countries. By January 2022, the use of crypto assets is fully banned in China, Egypt, Iraq, Qatar, Oman, Morocco, Algeria, Tunisia and Bangladesh. The source further announces that forty-two other countries have imposed restrictions which, in practice, inhibit the use of digital coins, rendering a similar result to a full ban.[38]
In contrast, other countries are receptive to the idea of adopting this asset type. Japan was the first nation to fully accept Bitcoin.

2.3.5. Absence and inadequacy of regulation

Regulators have covered almost all aspects of the traditional financial sector. A source points out that this phenomena was fuelled by the 2008 Global Financial Crisis.[39] The lack of regulation, combined with a reliance on self-regulation of the financial industry, are indicated as the main drivers. Since then, there has been a collective effort, from diverse international entities, to achieve higher standards of financial stability and consumer protection.
The authors reveal that, while the traditional financial system is more focused on stability, the crypto market shows a bigger concern with consumer protection.
Even so, consumer protection efforts may look very different, depending on who is regulating it. The authors indicate that in some countries, regulators adopted a more positive approach, while others were stricter, banning some functions, such as ICOs.
Although it is recognized that regulating crypto assets is not a simple mission, it is a necessary one to tackle legal issues, as previously mentioned.
According to the purpose of this study, deeper attention will be paid to the solutions adopted by the European Union regulators, which will then be compared to the U.S.A..

2.4. Adoption by countries

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38 Marco Quiroz-Gutierrez, ‘Crypto is fully banned in China and 8 other countries’ *Fortune* (4 January 2022), <fortune.com/2022/01/04/crypto-banned-china-other-countries/> accessed 25 January 2022.
39 Daskalakis and Georgitseas (n 1) 70.

As previously analysed within Chapter 2, there is still a lot of doubt and confusion surrounding the definition of crypto assets, its valuation and the underlying legal issues. Nonetheless, to better understand how all these implications play out in reality, the cases of Venezuela and El Salvador will be explored. On the one hand, these examples indicate a growing acceptance of crypto assets by governments, which may potentially boost the regulatory efforts worldwide and increase security and trust. On the other hand, however, these assets may end-up being used by political players to achieve specific interests, which may not always be legal or beneficial for the people.

2.4.1. Venezuela

Venezuela has contributed to the history of crypto assets, by being the first country to launch a digital currency promoted by a government and backed up by physical assets, in this case the country's oil reserves.

The mention of this case seeks to portray how the adoption of crypto assets by governments may take place, but also to point out the hidden political motives that may compromise the trustworthiness of this asset class.

Venezuelan president, Nicolás Maduro, announced in December 2017 a plan to launch a state-backed crypto currency - *Petro*.

As claimed by its own White Paper, *Petro* is the first digital coin to be emitted by a state and backed up by natural resources.[40] The initial value of *Petro* is mirrored by the price of a barrel of oil, going around $60. However, the government recognizes that allowing the cost of this digital coin to be dependent on the fluctuations of the oil market, would lead to extreme volatility. Moreover, the white-paper further clarifies that *Petro* is a national currency, therefore also subject to depreciation if the country's exportation levels decrease. As a result, President Maduro determined that the value of *Petro* would be calculated through an automatic index, representing several Venezuelan commodities.

Furthermore, the withe-paper described the government's goal of attracting investment, in order to reactivate the economy and the Venezuelan financial system.

Regarding the underlying technology, *Petro* relies on its own blockchain, therefore allowing transactions to take place without the interference of a third party.

[40] SUNACRIP and Gobierno Bolivariano de Venezuela, *Petro Hacia la Revolución Digital Económica* (White Paper).

On a more political note, the white-paper underlines the clear aim of *Petro* to represent a counter-action against the dominion of the financial systems controlling the world, fighting to achieve the democratization of the economy worldwide.

As a matter of fact, *Petro* comes as a strong political move and not only an economic one. The adoption of this digital coin seems to have two underlying objectives: 1. diminish the effects of the trade embargoes imposed by the U.S.A. and, 2. attract foreign investment.

Sources claim that *Petro* was born out of a collaboration between Venezuela and Russia.[41] According to Time, the motivation for Russia's support in this situation goes back to 2014. At the time, Russia was subject to economic sanctions, imposed by the U.S. and its allies, for the invasion of Ukrainian territory. The largest country on the planet intends to diminish the ability of the West to impose such measures. Vladimir Putin underlined his intention to lead Russia to "overcome the excessive dominance" of the U.S. Dollar, in the policy paper titled "Russia is ready in the BRICS format to fight the dominance of some reserve currencies".[42]

Considering Russia found it too risky to attempt creating a digital currency of the Ruble, sources claim the Kremlin convinced Venezuela to do it instead. This opportunity was powered by the fragile economic state of the country, after the collapse of the Bolivar. Amid the economic crisis, Russia continuously supported Venezuela, by means of loans and investments.

In August 2017, the U.S.A. imposed sanctions against the South American country, in an effort to punish Nicolas Maduro for his "deepening authoritarianism", as classified by *Time*.

Nicolás Maduro went as far as to compare the new coin to "kryptonite" to be used against the U.S. government, or "Superman", quoting Venezuela's President.

As a response to the creation of the digital currency, the U.S. declared that the purchase or use of *Petro* would amount to a breach of the aforementioned sanctions. Besides, the U.S.A. prohibited anyone under its jurisdiction to contribute to the development of the new digital coin.

Nicolás Maduro expected the sale of *Petro* to reach $6 billion, however this goal was weakened by the fragile Venezuelan economy. According to an Aljazeera report, Venezuelans did not fully grasp the complicated nature of the crypto asset and feared, since the beginning, prices would

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[41] Simon Shuster, 'Russia Secretly Helped Venezuela Launch a Cryptocurrency to Evade U.S. Sanctions' *Time Magazine* (20 March 2018) <time.com/5206835/exclusive-russia-petro-venezuela-cryptocurrency/> accessed 25 January 2022.

[42] 'Russia is ready to fight the dominance of some reserve currencies in the BRICS format' *TACC* (1 September 2017) <tass.ru/ekonomika/4523246> accessed 25 January 2022.

continue to rise.[43] In addition, the coin had almost no application, having been used to pay retirees or to indicate the price for services or fines.[44] More recent sources indicate that *Petro* has lost almost all its applicability since its launch, in February 2018, calling it a “failure”.[45]

Moreover, reliable sources raise suspicions that the invested value might have been used to finance criminal activities, such as corruption and money laundering.[46]

Despite the general disbelief in P*etro*, Venezuelans have registered very high levels of crypto currency usage.[47] Data shows that the adoption of digital coins rises especially when the Bolivar declines in value, due to inflation.

2.4.2. El Salvador

Differently from what happened in Venezuela, El Salvador did not create its own crypto currency. Nonetheless, this country provides another important example of governments adopting digital coins as national currency.

El Salvador recently made headlines for being the first country to adopt *Bitcoin* as legal tender, in September 2021.[48] The crypto asset can since be used to pay taxes or to take out cash from designated machines. Moreover, legislation was put in place to force companies and businesses to accept Bitcoin as means of payment.

Nonetheless, the decision was faced with some criticism by Salvadorans. Protests took place in San Salvador, the capital, and reports claim 70% of the nation is against the measure. Many claim they will continue to use US Dollars, as has been done in the past two decades.

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[43] ‘Venezuela rolls out new currency amid rampant hyperinflation’ *Aljazeera* (20 August 2018) <www.aljazeera.com/economy/2018/8/20/venezuela-rolls-out-new-currency-amid-rampant-hyperinflation> accessed 25 January 2022.

[44] Brian Ellsworth, ‘As Venezuela's economy regresses, crypto fills the gaps’ *Reuters* (22 June 2021) <www.reuters.com/technology/venezuelas-economy-regresses-crypto-fills-gaps-2021-06-22/> accessed 25 January 2022.

[45] Andrés Engler, ‘Venezuela’s New Digital Bolivar Isn’t Digital, and It Won’t Solve the Country’s Economic Crisis’ *CoinDesk* (07 October 2021) <www.coindesk.com/policy/2021/10/07/new-venezuelas-digital-bolivar-isnt-digital-and-it-wont-solve-the-countrys-economic-crisis/> accessed 25 January 2022.

[46] Mike Lasusa, ‘Venezuela's New Digital Currency: Economic Gamble or Criminal Scam?’ *InSight Crime* (13 March 2018) <insightcrime.org/news/analysis/venezuela-new-digital-currency-economic-gamble-criminal-scam/> accessed 25 January 2022.

[47] Chainalysis Team, ‘The 2020 Global Crypto Adoption Index: Cryptocurrency is a Global Phenomenon’ (*Chainalysis* , 8 September 2020) <blog.chainalysis.com/reports/2020-global-cryptocurrency-adoption-index-2020/> accessed 25 January 2022.

[48] ‘El Salvador: Bitcoin adoption met with flash crash, suspicion’ *DW* (08 September 2021) <www.dw.com/en/el-salvador-bitcoin-adoption-met-with-flash-crash-suspicion/a-59112622> accessed 25 January 2022.

The measure is also widely criticized by more traditional economists, who accuse President Nayin Bukele of wasting taxpayer money.[49] Also regulators express some distrust by pointing out the lack of user protection.[50] The decision was quickly adopted by the Congress, within a day of being suggested, which led to objections regarding the lack of public consultation.

The main argument against the use of *Bitcoin* is seeded on the fact that the small country relies immensely on remittances from the more than 2.5 million Salvadorans living abroad. These contributions amount to almost one quarter of El Salvador's Gross Domestic Product(GDP), having reached almost $6 billion in 2020. There is generalized fear that, due to the extreme volatility of *Bitcoin*, illustrated on image 4 (Annex I), expatriates will refrain from using it to send money into the country.[51]

Nonetheless, President Bukele argues that Bitcoin allows Salvadorans to save an expected amount of $400 million per year, on remittance fees. Moreover, the leader of El Salvador underlines that the legal tender does not entail mandatory use.

Despite the President's arguments, international financial authorities are not convinced. Back in June 2021, when El Salvador was planning to adopt Bitcoin as legal tender, the country asked the World Bank for help with the implementation. The institution rejected the request based on concerns with transparency.[52]

In more recent developments, from January 2022, the International Monetary Fund (IMF) has strongly advised El Salvador to overturn the adoption of Bitcoin as legal tender. The IMF firmly alerted to the risks associated with using Bitcoin and expressed that it would not be willing to loan money to the Central American country.[53]

Despite the generalized distrust by financial entities, such as the IMF or the World Bank, many crypto users worldwide support the President's initiatives.

In November 2021, the president announced his plan to give life to a Bitcoin City, estimated to cost around $17 billion. The leader plans to raise $1 billion through the sale of a sovereign Bitcoin bond. This initiative displays Nayin Bukele's enthusiasm and trust in the original digital coin.

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[49] Nicolas Martin, 'El Salvador's president pushes ahead with cryptoplan' *DW* (13 December 2021) <www.dw.com/en/el-salvadors-president-pushes-ahead-with-cryptoplan/a-60062283> accessed 25 January 2022.

[50] DW (n 48).

[51] ibid.

[52] 'World Bank rejects El Salvador request for Bitcoin help' *BBC News*, (17 June 2021) <www.bbc.com/news/business-57507386> accessed 25 January 2022.

[53] 'IMF urges El Salvador to remove Bitcoin as legal tender' *BBC News* (26 January 2022) <www.bbc.com/news/world-latin-america-60135552> accessed 26 January 2022.

Due to the novelty of this case, at the time of writing, further developments are expected to occur within the year 2022.

2.5. Chapter conclusion

The novelty of crypto assets in the financial system, accompanied by the several legal issued presented, left countries unprepared to adapt to the exponential growth and adoption. Important to note, for the study at hand, that the risks arising out of the use of digital currencies are not tied to the limits of any border, thus calling for international cooperation and worldwide action.

Nonetheless, some jurisdictions have shown a more welcoming approach to virtual currencies, such as El Salvador and Venezuela, while others adopted a strict attitude, such as China, banning crypto assets altogether.

As was shown, of crucial importance for the future of crypto currencies is to define the assets so that appropriate legal measures can be implemented and the legal issues minimised.

3. Current classification of crypto assets and legal status

As crypto assets start to proliferate, and with it the legal issues mentioned in the previous chapter, countries were awakened to the need to classify them and impose some regulatory measures.

Nonetheless, as will be shown, so far both missions have fallen short. There is still some uncertainty regarding the legal classification of these assets, mainly due to the case-by-case analysis which is performed, both in the EU, as well as in the U.S..

However, it is possible to verify that the two regions have engaged in similar thought processes when assessing possible classifications. The potential designation as Securities was proposed by the two, as well as the special concern around ICOs.

Starting from 2017, both the EU and the U.S. have committed to regulate ICOs, which became increasingly widespread around the same time. The global investment in ICOs in the year of 2017 was more than twice higher than the amount invested in virtual currencies.[54] This type of crypto assets raises special concerns regarding investors protection due to the large number of inexperienced users who might be targeted.

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[54] Daskalakis and Georgitseas (n 1) 69.

Following the purpose of the present comparative study, an analysis of how the European Union and the U.S.A. have classified crypto assets, the current legal status and applicable laws, will serve to determine the differences and similarities between the two jurisdictions.

3.1. European Union

The European Union, as a whole, and the Member States individually, have awakened to the need to understand, classify and regulate this emergent asset class. As pointed out by a relevant research article, there have been several significant projects to promote and accompany the progress of blockchain technology regarding the financial sector.[55] One example is the EU's Blockchain Strategy, which mirrors its goal of "becoming an innovator in blockchain and a home to significant platforms, applications and companies".[56] Another one worth mentioning is the creation of the EU Blockchain Observatory and Forum, whose goal is to speed blockchain innovation and foster the creation of an EU blockchain ecosystem. Likewise, the International Association for Trusted Blockchain Applications which enables DLT developers and users to connect with regulators and policy makers, thus pushing innovation in the sector.

Nonetheless, it became clear that there was the need to regulate this area, otherwise serious risks to consumer and investor protection, as well as financial crimes, would proliferate.

According to the same source, European entities and National Competent Authorities (NCAs) made extensive efforts by engaging in public consultations and producing extensive reports on the matter.[57] In general, European legislators welcome crypto assets and believe it to be a "long-term trend", working towards establishing a regulatory framework that will not overburden the industry. Nonetheless, these authorities recognize the pressing need to bring some regulatory clarity and safety.

While the European Union legislators wait for further developments, some Member States have begun to regulate these products within their own jurisdictions, which in turn could lead to a potential problem of legal disparity. ESMA went as far as to claim that "international cooperation is required to address this global phenomenon".[58] This concern is sustained by the global reach of

[55] Valeria Ferrari, 'The regulation of crypto-assets in the EU – investment and payment tokens under the radar' (2020) vol 27 (issue 3) Maastricht Journal of European and Comparative Law, 325-342 <https://journals.sagepub.com/doi/full/10.1177/1023263X20911538 > accessed 26 January 2022.

[56] Commission, 'Blockchain Strategy' <digital-strategy.ec.europa.eu/en/policies/blockchain-strategy> accessed 26 January 2022.

[57] Ferrari (n 55) 328.

[58] European Securities and Markets Authority (n 11) 6.

this industry which, by facing stricter regulatory requirements in one jurisdiction, might just relocate to a more convenient one.

As a consequence, European regulators strive to achieve a balanced legislative approach, which will bring and maintain crypto-related businesses within EU jurisdictions.

In January 2019, the European Banking Authority (EBA) together with ESMA, produced two reports advising the European Commission, the European Parliament and the European Council, regarding crypto assets.

The EBA indicated their role in supervising the progress of crypto assets and determining whether the assets fall under the scope of the Payment Services Directive 2[59] and the E-money Directive[60]. However, the report concluded that "it appears that a significant portion of activities involving crypto assets do not fall within the scope of current EU financial services law (but may fall within the scope of national laws)".[61]

ESMA has declared that there is a need to design a special framework for crypto assets, since the authority cannot include these instruments within the definition of MiFID[62] electronic money or financial instruments. According to the European Commission, e-money is a digital alternative to cash, allowing users to make payments with money kept on a card, phone or online.[63]

In addition, both ESMA and the EBA agreed that crypto-assets must be regulated because, in the absence of relevant rules, investors are exposed to relevant risks.

- **ICOs**

  In the European Union, there are special rules set in place to regulate ICOs. These instruments are allowed, as long as there is compliance with Anti-Money Laundering rules and relevant business regulations, and the required licenses are granted.[64]

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[59] Directive 2015/2366 of the European Parliament and of the Council of 25 November 2015 on payment services in the internal market, amending Directives 2002/65/EC, 2009/110/EC and 2013/36/EU and Regulation (EU) No 1093/2010, and repealing Directive 2007/64/EC [2015] OJ L 337 (Payment Services Directive 2).

[60] Directive 2009/110/EC of the European Parliament and of the Council of 16 September 2009 on the taking up, pursuit and prudential supervision of the business of electronic money institutions amending Directives 2005/60/EC and 2006/48/EC and repealing Directive 2000/46/EC [2009] OJ L 267 (Electronic Money Directive).

[61] European Banking Authority (n 12) 15.

[62] Directive 2004/39/EC of the European Parliament and of the Council of 21 April 2004 on markets in financial instruments amending Council Directives 85/611/EEC and 93/6/EEC and Directive 2000/12/EC of the European Parliament and of the Council and repealing Council Directive 93/22/EEC [2004] OJ L 145.

[63] Commission, 'E-money' <ec.europa.eu/info/business-economy-euro/banking-and-finance/consumer-finance-and-payments/payment-services/e-money_en> accessed 26 January 2022.

[64] Daskalakis and Georgitseas (n 1) 72.

In November 2017, the ESMA issued two statements concerning ICOs. The first, targeting investors, underlined the high risks associated with investing in these instruments and the lack of regulatory framework. The second, for companies, explained that the structure of ICOs will establish its exposition, or not, to the EU regulatory framework.

Consequently, according to ESMA's statement, ICOs will be subject to EU regulations if the respective tokens are "transferable securities". In case the assets register this characteristic, companies must be fully licensed and are obliged to issue an approved prospectus for the respective offer. As will be further approached in chapter 5, companies are also forced to comply with Anti-Money Laundering rules.

The need to regulate goes hand in hand with the need to classify these assets correctly. Thus, there has been an active effort by several European authorities to clarify the legal classification of crypto assets.

The Court of Justice of the European Union (CJEU) has, by occasion of Case Skatteverket v David Hedqvist[65] in 2015, provided a classification of Bitcoin, and other crypto currencies.[66] The CJEU determined that "the *Bitcoin* virtual currency is a *direct means of payment* between the operators that accept it". However, this case is relevant for fiscal purposes, therefore it will be further considered in chapter 4.

The EBA has divided the possible classifications into three groups: 1. Financial instruments, 2. Electronic money, and 3. None of the foregoing.[67] This division was illustrated by a diagrammatic representation, which can be found on Annex I, as image 5.

Having regard to this separation, this subchapter will further analyse the arguments building up the two first classifications.

3.1.1. Crypto assets as financial instruments - securities:

One of the proposed classifications of crypto assets in the European Union is as "securities", under MiFID II[68]. According to this Directive, digital assets are "financial instruments" by being considered "transferable securities", under Annex I, Section C. The same legal instrument provides that

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[65] Case C-264/14, *Skatteverket v David Hedqvist* [2015] ECLI:EU:C:2015:718.

[66] Court of Justice of the European Union, 'The exchange of traditional currencies for units of the 'bitcoin' virtual currency is exempt from VAT' (CVRIA Press Release No 128/15, Luxembourg, 22 October 2015).

[67] European Banking Authority (n 12) 15.

[68] Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU [2014] OJ L 173.

"transferable securities" are "securities which are negotiable on the capital market, with the exception of instruments of payment", as settled by Article 4(1)(44).
The discussion around tokens being classified as securities was opened by the U.S. Securities and Exchange Commission in 2017, a topic which will be later developed in chapter 3.2. Under EU law, a similar approach was followed by enabling "transferable securities" to be flexibly interpreted. Accordingly, EU courts have adopted a set of functional criteria to assess what can be classified as security under MiFID parameters.
This classification subjects crypto assets to the scope of several legal instruments, at European and national level, regulating the EU financial market. To name a few: MiFID II and the Markets in Financial Instruments Regulation (MiFIR)[69], the Prospectus Regulation[70] and the Prospectus Directive[71], the Market Abuse Regulation[72], the Transparency Directive[73], and the Central Securities Depositories Regulation[74].
In addition, if classified as securities, digital assets remain under the supervision of ESMA, who has vowed to monitor crypto assets in order to register possible risks.

- **MiFID II and MiFIR:**

  Under MiFID II, any company enabling investment in financial instruments, must be authorized as an investment firm by the relevant NCAs. Moreover, there is a set of rules, regarding consumer protection, transparency, conduct of business and reporting, which must be complied with.

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69 Regulation No 600/2014 of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Regulation No 648/2012 [2014] OJ L 173.
70 Regulation 2017/1129 of the European Parliament and of the Council of 14 June 2017 on the prospectus to be published when securities are offered to the public or admitted to trading on a regulated market, and repealing Directive 2003/71/EC [2017] OJ L 168.
71 Directive 2003/71/EC of the European Parliament and of the Council of 4 November 2003 on the prospectus to be published when securities are offered to the public or admitted to trading and amending Directive 2001/34/EC [2003] OJ L 345/64.
72 Regulation No 596/2014 of the European Parliament and of the Council of 16 April 2014 on market abuse (market abuse regulation) and repealing Directive 2003/6/EC of the European Parliament and of the Council and Commission Directives 2003/124/EC, 2003/125/EC and 2004/72/EC [2014] OJ L 173.
73 Directive 2013/50/EU of the European Parliament and of the Council of 22 October 2013 amending Directive 2004/109/EC of the European Parliament and of the Council on the harmonisation of transparency requirements in relation to information about issuers whose securities are admitted to trading on a regulated market, Directive 2003/71/EC of the European Parliament and of the Council on the prospectus to be published when securities are offered to the public or admitted to trading and Commission Directive 2007/14/EC laying down detailed rules for the implementation of certain provisions of Directive 2004/109/EC [2013] OJ L 294.
74 Regulation No 909/2014 of the European Parliament and of the Council of 23 July 2014 on improving securities settlement in the European Union and on central securities depositories and amending Directives 98/26/EC and 2014/65/EU and Regulation No 236/2012 [2014] OJ L 257.

Notwithstanding, when classifying crypto-assets as financial instruments, attention must be paid to the different services or activities provided in fact. ESMA differentiates between platforms that should be classified as multilateral systems[75], platforms providing broker services and advertising platforms for buying and selling interest. Only the first two are subject to MiFID II rules.

Nonetheless, it is important to highlight that the application of MiFID is not without its challenges. All things considered, the Directive, which became effective in November 2007, did not account for this, at the time unknown, asset class. Therefore, issues might arise from its practical application, as pointed out by *Ferrari*.[76]

- **Prospectus Directive and Prospectus Regulation**

The Prospectus Directive and Prospectus Regulation both establish important rules to foster investor protection by tackling information disparities within the EU financial market. Article 1 of the Regulation demands that companies make a prospectus available, when publicly offering securities or when these are traded on a regulated market, situated or operating within a Member States.

The prospectus is a comprehensive document, which must include all relevant information for investors, in order to allow them to make a knowledgeable evaluation of the circumstances surrounding the transaction. The Regulation provides a clear standardized structure to be followed.

Publication of the prospectus is dependent on the approval by the competent NCA, after which enables the document to be passported throughout the EU.

The Regulation offers exemptions to the rule imposed by Article 1, mostly for situations where the target audience is composed predominantly of qualified investors. Usually, the offering of ICOs does not fit under the exceptions list, due to the very large number of targeted users which makes it burdensome to verify the expertise level of investors.

- **Central Securities Depositories Regulation**

The classification of crypto assets as securities leads to the application of the Central Securities Depositories Regulation. Accordingly, Article 2(1) declares that, if an asset is classified as

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[75] Directive 2014/65/EU (n 74) Art. 4(19): 'Multilateral system' as 'any system or facility in which multiple third-party buying and selling trading interests in financial instruments are able to interact in the system'.

[76] Ferrari (n 55) 330-332.

security and traded on a trading platform, the respective issuer must secure the correct representation in book-entry form.

Nonetheless, it remains unclear how these record-keeping rules apply to crypto assets. Furthermore, *Ferrari* explains that serious concerns arise out of the lack of adequacy of the currently used identifiers and classifications to fulfil the reporting duties.[77] It further adds that it remains uncertain what precisely constitutes safekeeping when in connection with crypto assets. However, the ESMA defends that businesses which keep private keys for their users should be considered as engaging in safekeeping activities, therefore subject to the CSD Regulation.

The Prospectus Regulation and the MiFID, identify similar elements in their perception of crypto assets, namely the features of 1. *tradability*, 2. *negotiability*, and 3. *standardization*, while also presenting some sort of financial risk.

Regarding *tradability*, it is guaranteed by the blockchain technology, which enables the transference of ownership between users. In what concerns *negotiability*, it is connected with the possibility to *de facto* trade crypto assets on existing platforms. Lastly, *standardization* is ensured by verifying a set of common elements that make it possible to consider the assets as a homogenous class, as per the Committee of European Securities Regulators (CESR) Technical Advice on the MiFID.[78] This assessment is made on an individual issuers base, meaning that the tokes offered by a certain issuer, must be fungible and uniform.

Nonetheless, these fixed requirements need to be combined with a case-by-case evaluation. This decision must be based on whether 1. the assets are similar to the transferable securities listed by MiFID, and 2. whether there are concrete financial risks that justify applying the Prospectus Regulation and Directive. Even so, crypto assets are commonly compared to shares and bonds, and there is substantial financial risk associated.

3.1.2. Crypto assets as electronic-money

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[77] ibid 336.

[78] Committee of European Securities Regulators, 'Technical Advice to the European Commission in the Context of the MiFID Review and Responses to the European Commission Request for Additional Information' (CESR/10-802, 29 July 2010).

In contrast, different sources agree that crypto assets could fall under the classification of "electronic-money" (e-money).[79] E-money, as previously described, is a digital alternative to cash, and is governed by the E-Money Directive (EMD), which entered into force in 2011.

This piece of legislation provides a legal framework for the supervision of e-money institutions and corresponding business practices.

Regardless of, as already indicated, ESMA's rejection of the possibility of classifying crypto assets as e-money, the European Banking Authority (EBA) has argued otherwise. More precisely, EBA has issued a Report advising the European Commission on crypto assets[80], in 2019, where the applicability of the EMD and the Payment Services Directive 2 (PSD2) to virtual currencies is explored.

The EBA underlines in the report that the analysis must be "carried out on a case-by-case basis, bearing in mind that different crypto assets have different characteristics, which in some cases may change during the lifecycle of the asset, and that a *substance over form* approach should be adopted".[81]

- **Electronic Money Directive**

  According to the Authority, crypto currencies can only be qualified as e-money, if the requirements anticipated by Article 2(2) EMD are met. The provision establishes that electronic money is "electronically, including magnetically, stored monetary value as represented by a claim on the issuer which is issued on receipt of funds for the purpose of making payment transactions as defined in point 5 of Article 4 of [PSD2], and which is accepted by a natural or legal person other than the electronic money issuer".

  Despite the tight requirements, EBA claims that five competent authorities reported a collection of cases where, according to their understanding, services offered by crypto-related businesses should fall under the scope of the classification as e-money. Nonetheless, it is strongly emphasized that, by force of Article 2(3), only electronic money issuers can engage in such activities.

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[79] Antonios Broumas, 'Impact of the MiCA proposal on the taxation of crypto-assets within the EU' *International Tax Review* (19 October 2021) <www.internationaltaxreview.com/article/b1v26088yfnd4t/impact-of-the-mica-proposal-on-the-taxation-of-crypto-assets-within-the-eu> accessed 27 January; Ferrari (n 55) 339.

[80] European Banking Authority (n 12).

[81] ibid 12.

- **Payment Services Directive 2**

Furthermore, the report focuses on the applicability of the PSD2 to crypto assets, which depends on their classification as "funds". It starts by clarifying that digital coins cannot be classified as "funds" within the meaning of Article 4(25)PSD2, unless they qualify as e-money under EMD2. In addition, "funds" encompasses any "payment service", as listed on Annex I of PSD2, using DLT, through means of a crypto asset which qualifies as e-money.

These classifications entail several obligations. To start with, companies issuing electronic-money, which, as seen, can include crypto assets, must be registered as electronic money issuers, as demanded by Article 10 PSD2. Moreover, these firms must comply with multiple other requirements such as owning appropriate sources, sufficient initial capital and own funds, and keeping safeguarding measures in place. In addition, companies classified as electronic money institutions, involved in crypto assets activities, shall put in place appropriate reporting and disclosure requirements.

Within the report, the EBA highlights the need for uniform reporting duties for activities related with crypto currencies within the EU. As such, a common monitoring template will be provided so that NCAs can distribute it among the relevant institutions.

3.2. U.S.A.

In the U.S.A., efforts have been made by different entities to regulate and define crypto assets. The Federal agencies have deeply engaged and focused on this asset class. Most of them recognize blockchain technology as an important part for the U.S.'s future infrastructure and underline their support for the involvement of the U.S.A in its development. The agencies that registered a special involvement in this sector were the Securities and Exchange Commission (SEC), the Commodity Futures Trading Commission (CFTC), the Federal Trade Commission and the Department of the treasury, with the cooperation of the Internal Revenue Service (IRS), the Office of Comptroller of the Currency (OCC) and the Financial Crimes Enforcement Network (FinCEN).[82]

Having a clear classification at federal level is of extreme relevance, as it will determine the applicability, or not, of different acts. Recently, the U.S. Financial Crimes Enforcement Network

[82] Joe Dewey, 'Blockchain & Crypto Currency Laws and Regulations 2022 | USA' (2021) Global Legal Insights <www.globallegalinsights.com/practice-areas/blockchain-laws-and-regulations/usa> accessed 28 January 2022, ch 1, para 1.

(FinCEN) has declared that the Bank Secrecy Act (BSA) shall be applicable to companies engaged in money transactions in convertible virtual currencies.[83] The entities falling under the scope of the BSA must then register with FinCEN as a Money Service Business. Moreover, legally established crypto currency exchange companies in the U.S. are under the scope of the Bank Secrecy Act (BSA). This legislation supervises financial institutions and payments transmitters and includes rules on recordkeeping and transaction monitoring. Under this act, companies must comply by adopting AML and KYC programs. In addition, they must report relevant information to the regulator and be fully licensed according to the Financial Crimes Enforcement Network requirements, as well as statal permits. As will be further explored in the following chapters, this implications are all rooted in the issue of how to classify crypto assets.

At the state level, multiple governments issued laws to regulate crypto currencies and blockchain technology. It is proposed that there have been two contrasting approaches to regulation, one favourable, the other restrictive.[84] The states following the favourable approach, perceived crypto assets as an important technological development and worked to foster and promote it. For them, a supportive attitude towards digital assets would lead to more technology investment, which in turn stimulates local economies and allows more leeway to invest in public services. Some of the regulations included exempting crypto currencies from state securities laws or money transmission statutes.

Wyoming is one of the prime examples of a state looking to promote virtual currencies while vitalizing its local economy, being considered the most "crypto-friendly" jurisdiction. The state passed laws which permitted the creation of "crypto focused banks", which should assist businesses in holding crypto assets safely and legally.

Following the trend, Colorado also registered a favourable environment for digital coins, having declared that digital assets are exempted from state securities regulations.

Another state, Ohio, introduced an innovative solution by starting to accept taxes in digital coins, being the first jurisdiction to do so.

Contrarily, restrictive approaches were adopted as well. Iowa, as an example, passed a bill banning state and its political subdivisions from receiving any compensation by means of digital assets.

Nonetheless, several other states have alerted about the risks involved with this type of investment.

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83 Financial Crimes Enforcement Network, 'Application of FinCEN's Regulations to Certain Business Models Involving Convertible Virtual Currencies' (FIN-2019-G001, 09 May 2019).

84 ibid.

As a starting point, it is important to clarify that crypto assets are not classified as "financial instruments". Under U.S. GAAP[85] (general accepted accounting principles), digital coins do not fit under the scope of the definition of financial instruments, on the grounds that this asset class does not represent cash, or a contract under which an obligation to deliver or receive cash is established.
On another note, crypto currencies had already previously been subject to a definition for the purpose of tax treatment. However, this topic will be analysed in depth in a dedicated chapter.
Nonetheless, there have been some contradictory opinions regarding the classification of digital assets by federal agencies in the U.S. While the SEC classifies crypto currencies as "securities", the CFTC considers that these assets are "commodities". However, as will be explored, the different classifications portray distinct types of crypto asset. As deeply analysed in chapter 2.1., several products co-exist within the meaning of crypto currencies.

3.2.1. Crypto assets as Commodities

In the United States, *Bitcoin* and crypto currencies in general, have potentially been classified as commodities.[86] This definition is mainly due to crypto derivatives, such as futures, which are traded on public exchanges, and therefore subject to control by the Commodity Futures Trading Commission (CFTC).
The CFTC is a Federal agency entity, working to regulate U.S. derivatives markets as means of promoting its integrity, resilience and vibrancy.[87]
By classifying digital currencies as commodities, these assets become subject to the rules set out in the Commodity Exchange Act (CEA).[88] The CEA sets the statutory framework for the trade of commodity futures.

[85] 'The GAAP are a commonly recognized set of rules and procedures designed to govern corporate accounting and financial reporting in the United States.' *CFI*, 'What is GAAP?' <corporatefinanceinstitute.com/resources/knowledge/accounting/gaap/> accessed 28 January 2022.
[86] Dewey (n 83) ch 3.
[87] Commodity Futures Trading Comission, 'About the CFTC' <www.cftc.gov/About/AboutTheCommission> accessed 28 January 2022.
[88] 7 U.S. Code (June 15, 1936) *Commodity Echange Act.*

According to CFTC's classification of virtual currencies, these assets will be under this agency's authority in two situations: 1. when the digital asset is used in a derivatives contract; and 2. situations linked to attempts of fraud or manipulation implicating a digital coin traded in interstate commerce.[89]

Consequently, any futures, options, swaps and any derivative contracts based on the price of a crypto currency are commodities, subject to the CFTC and Commodity Exchange Act.[90]

A derivatives contract is a financial agreement, the value of which depends on an underlying asset. This type of contract can be traded on an exchange or over-the-counter, via a financial contract. Crypto derivatives are very common products among crypto trading platforms.

Classifying this type of asset as a commodity was the first step to allow the CFTC to charge crypto trading companies. Crypto focused businesses should, since then, register with the CFTC, or risk persecution. Under Section 4c CEA, companies engaged in crypto trading must register as swap execution facilities (SEF).

For crypto investors, the classification as commodities is more beneficial, allowing them to freely trade on both traditional asset markets, as well as crypto exchange platforms.

3.2.2. Crypto assets as Securities

In contrast, according to the SEC, digital coins are securities, therefore subject to the existing securities laws. This classification bears special importance for retail investors, who would then be forced to include in their annual tax forms all realized gains and losses from investments on digital assets.

The SEC focused solely on Initial Coin Offerings (ICOs) which, as explained on chapter 2.1., are confined in a specific platform, issued for a specific use, acting as an utility token. Under the agency's understanding, ICOs are investment contracts.

An investment contract, as defined by the U.S. Supreme Court, is "an investment of money in a common enterprise with a reasonable expectation of profits to be derived from the entrepreneurial or managerial efforts of others".[91]

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89 Commodity Futures Trading Commission, 'Bitcoin Basics' (2018) <www.cftc.gov/sites/default/files/2019-12/oceo_bitcoinbasics0218.pdf> accessed 28 January 2022.

90 Dewey (n 82) ch 3.

91 U.S. Supreme Court [1946] *SEC v. W. J. Howey Co.*, 328 U.S. 293, 30.1.

There is a test - the Howey Test - built on U.S. case law, which serves the purpose of determining whether an asset can be considered an investment contract, consequently falling under the classification of securities. When undertaking this test, the court, and subsequently the SEC, focus on the substance of the transaction.

The Howey Test was built during the Supreme Court case *SEC v. W.J. Howey Co.*, which took place in 1946. According to the test, three requirements need to be fulfilled for an asset to be considered an investment contract: 1. needs to be an investment of money with the expectation of future profits; 2. there must be investment of money in a common enterprise, and; 3. profits need to arise from the efforts of a promoter or a third party.[92]

Therefore, under this test, the SEC states that ICOs acting as utility tokens are to be considered securities, if the Howey Test is fulfilled.[93] Nonetheless, the SEC's Director of Corporate Finance clarified in 2018 that the classification as security is dependent on how the asset is offered and sold. As such, the classification of ICOs as securities is not absolute.

In the event a digital token does fulfil the Howey test, then its issuer must take the necessary measures to register the security with the SEC, and will be subject to the Securities Act.[94]

The Securities Act of 1933 was issued by the Congress, as the main mechanism to fight securities fraud. Under this Act, companies can find several exceptions allowing them to be exempted from mandatory registration with the SEC.

3.3. Chapter conclusion

In the European Union, different authorities and international bodies have given some thought to the discussion around the classification of crypto assets. However, the result is so far inconclusive, thus the general consensus is that there is no adequate classification that would allow digital assets to be included in the scope of any of the existing instruments used in the financial sector. Nonetheless, European authorities have discussed the possibility to classify digital coins as securities or electronic money, which can only be clarified by a case-by-case analysis. If treated as securities under MiFID II, then crypto assets would have to comply with a strict legal framework and hinder

[92] U.S. Securities and Exchange Commission, 'Framework for "Investment Contract" Analysis of Digital Assets' (2019) para II <www.sec.gov/corpfin/framework-investment-contract-analysis-digital-assets> accessed 28 January 2022.

[93] Dewey (n 82) ch 4.

[94] Securities Act of 1933, as amended through P.L. 115–174, enacted May 24, 2018.

its practical application. In contrast, the classification as electronic money, and subject to the E-money Directive, is supported by the EBA who demands clear reporting and monitoring obligations for the NCAs.

In the U.S., similarly, there is no agreement as to how crypto currencies should be classified, thus two opinions co-exist. While digital coins, such as Bitcoin or Ethereum, and their respective derivative contracts are classified as commodities, subject to the Commodity Exchange Act, ICOs fall under the scope of the Securities Act.

Notwithstanding, in the U.S, the states also issue their own legislation, the so-called blue sky laws. Accordingly, any issuer of crypto assets must make sure to follow the applicable laws in each relevant jurisdiction, until a Federal approach is adopted. Not differently, in the European Union, also a union-wide solution is yet to come into force.

In the lack of clear answers provided by the legislation currently in force, another important element playing a crucial role in both regions are judicial decisions and the understanding of courts of how crypto assets should be classified. In the European Union, the relevant case *Skatteverket v David Hedqvist* not only allowed a first view as to how the ECJ views digital currencies, but also brought major developments in the taxation of crypto coins. Similarly, in the United States, the current understanding as to whether or not digital assets shall be treated as securities is based on a test developed in the case *SEC v. W.J. Howey Co.*

4. Tax treatment of crypto assets

As an investment asset, potentially bringing gains to holders, countries and international entities have been alerted for the need to clarify how and if profits arising out of crypto assets should be taxed. As such, in the European Union several players have focused on the matter, while Member States have chosen different fiscal approaches which go in line with their internal politics, the Court of Justice of the European Union issued a decision which set a precedent for the non-applicability of the Value-added tax. In the United States, a decision at federal level was adopted, this establishing a lot of certainty in this matter, despite the usual unclarity associated with crypto assets.

4.1. EU

The considerations mentioned in the previous chapter, which showed the difficulties surrounding the legal classification of crypto assets, also influences the tax treatment governing these instruments.

The EBA recognized the issue of the lack of a common taxonomy of digital assets on its "Report on Crypto assets".[95] As an alternative, to circumvent the absence of a precise and uniform classification, EBA proposed an approach which divides virtual currencies into three classes: 1. payment, 2. investment, and 3. utility tokens. The Report provides an explanatory illustration, which can be found in Annex I, under Image 6.

Accordingly, "payment tokens" are employed as means of payment for goods or services extraneous to the platform issuing them. Nonetheless, this asset class, where *Bitcoin* is included, may also generate investment profits through means of price fluctuation.

"Investment tokens", on the other hand, resemble shares and bonds due to the expectable returns linked to the venture, as well as the associated rights which are awarded to the investor. In fact, ICOs are a prime illustration, considering users are usually benefited not only from the rise in the valuation of the token, but also by means of voting rights or rights to future profits - similarly to shareholders.

Lastly, "utility tokens" are mainly used to provide specific rights to users within a platform, such as access to a service or a purchase.

Notwithstanding, EBA alerts to the possibility of combining the different features of each token to create new asset types.

4.1.1. VAT

In the European Union, as mentioned in chapter 3.1., the Court of Justice of the European Union has provided some guidance regarding the tax treatment that must be awarded to crypto assets, on *Skatteverket v David Hedqvist*.[96] The CJEU was called upon to provide a preliminary ruling regarding the proceedings between the Swedish tax authority and Mr. Hedqvist.

[95] European Banking Authority (n 12) 7.

[96] *Skatteverket* (n 65).

The decision, which centred around the interpretation of the VAT Directive Articles 2(1) and 135(1), allowed some clarity around the issue of the fiscal treatment of "the exchange of traditional currency for the *bitcoin* virtual currency and vice versa".[97]

The Directive clarifies, in Article 1, that the system of Value-Added Tax (VAT) encompasses the application of a proportional general tax on consumption to goods and services, calculated on the price, at a predetermined fixed rate.

The Swedish referring court posed two questions: 1. whether Article 2(1)(c) VAT Directive must include, under the scope of "supply of services", transactions where traditional currencies are exchanged for *Bitcoin* and vice versa, and 2. and whether Article 135(1)(d) to (f) must be read as allowing these transactions to be exempted from VAT.

The CJEU reached a positive answer to both questions. Thus, this case established that: 1. according to Article 2(1)(c) VAT Directive, the abovementioned transactions constitute the supply of services, and that 2. such transactions are exempted from VAT under Article 135(1)(e).

Furthermore, as duly noted on chapter 3.1, the CJEU has addressed the classification of virtual currencies, by claiming *Bitcoin* is a "direct means of payment".

Following this important decision, the CJEU has issued a Press Release to inform all Member States on the ground-breaking decision, as explored in the previous chapter.[98]

4.1.2. MiCA Regulation

With the upcoming MiCA Regulation, as part of the Digital Finance package[99], legal updates on the fiscal treatment of crypto assets are also expected. The Commission has proposed to issue the eight update of the Directive on Administrative Cooperation (DAC8) as a complement to the upcoming Regulation. The DAC8 will foster the information exchange within the Union's tax authorities. Moreover, it is expected to allow some certainty, when combined with the establishment of the legal status of virtual assets by MiCA, regarding the exact tax treatment to which digital currencies will be subject within the EU.[100]

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[97] Council Directive 2006/112/EC of 28 November 2006 on the common system of value added tax [2006] OJ L 347/1 (VAT Directive).

[98] Court of Justice of the European Union (n 66).

[99] Directorate-General for Financial Stability, Financial Services and Capital Markets Union, 'Digital Finance Package' (24 September 2020) <ec.europa.eu/info/publications/200924-digital-finance-proposals_en> accessed 03 June 2022.

[100] Broumas (n 79).

4.1.3. Approach by Member States

Regardless of the clarity provided by the CJEU for the application of the VAT Directive, and the expected developments which MiCA Regulation will allow, currently the tax treatment awarded to crypto currencies lies within the fiscal sovereignty of each Member State.
As such, countries within the Union have followed different approaches regarding how they treat crypto assets for fiscal purposes. In this chapter, three examples of crypto-friendly jurisdictions will be presented, namely Germany, Malta and Portugal. In addition, the case of Austria will be explored, as the country has recently adopted innovative legislation to clarify how crypto gains will be taxable.

- **Germany**

  Germany can be classified as one of the most favourable jurisdictions for investors dealing with crypto assets. In a ruling, as recent as May 2022, the German Federal Ministry of Finance issued a document, which is applicable nationwide, providing further clarification on the tax regime awarded to cryptocurrencies.[101]

  The country now counts with a legal provision which benefits crypto investors by allowing the gains produced by the sale of these assets to remain non-taxable, if 1. they do not exceed the value of six hundred euros, or 2. these coins were held for a period longer than one year.

  Additionally to providing further clarification regarding several crypto-related concepts, such as Lending and Proof of Work (Mining), among many others, the ruling reinforces the non-taxable regime awarded to crypto gains fulfilling one of the two conditions previously mentioned.

  This piece of legislation consolidates Germany's positioning as a favourable jurisdiction for crypto investors.

- **Malta**

  Commonly known for its particularly friendly tax laws, Malta provides a very favourable jurisdiction for investors in crypto assets.

[101] Bundesministerium der Finanzen, '*Einzelfragen zur ertragsteuerrechtlichen Behandlung von virtuellen Währungen und von sonstigen Token*' IV C 1 - S 2256/19/10003 :001; 2022/0493899 (10 May 2022) (FRG).

By November 2018, an extensive legislative package came into force on the island.[102] This innovative framework created a very beneficial setup for businesses and led a lot of companies dealing with crypto coins to relocate there.

The bundle of legislation included the Virtual Financial Assets Act[103] (VFAA), the Innovative Technology Arrangements and Services (ITAS) Act[104] and the Malta Digital Innovation Authority Act[105].

The first Act brought a lot of clarity regarding the definition of digital assets and how these can be differentiated from securities. In the light of the legislative developments of 2018 in Malta, also the Commissioner for Revenue in the country announced new improvements regarding the taxation regime of cryptocurrencies transactions. The Commissioner issued new interpretations of already existing laws, as a response to the new VFAA categorisations.

Accordingly, the Commissioner for Revenue defines DLT assets as either *coins* or *tokens*. While *tokens* resemble equities or derivatives, *coins* are completely separated from the definition of securities, being instead closer to fiat money, with the particularity of having a cryptographic function.

This classification impacts the fiscal regime of the traded assets because, in Malta, coins and utility tokens are excluded from the Income Tax Act, thus not being subject to taxation on income gains.

Nonetheless, this taxation regime applies only to individuals who reside[106] and are domiciled in Malta.

Due to the benefits associated with Maltese resident status, the country promotes many ways to attract investment in the national territory in exchange for residency.

Already since 2014, citizens from the European Union, the EEA and Switzerland are entitled to apply to the Residence Programme[107]. Under the programme, applicants who purchased or

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[102] Silvio Cilia, 'Is Malta the domicile of choice for crypto-millionaires?' *International Bar Association* <www.ibanet.org/article/A26900FC-B3DE-41FE-AC6B-A55CCC2B364A> accessed 03 June 2022.

[103] Chapter 590 Virtual Financial Assets Act (1 November 2018) Act XXX of 2018 as amended by Legal Notice 106 of 2021 and Act XLVI of 2021 (MT).

[104] Chapter 592 Innovative Technology Arrangements And Services Act (1 November 2018) Act XXXIII of 2019, as amended by Legal Notice 389 of 2020 (MT).

[105] ACT No. XXXI of 2018 (20 July 2018) (The MDIA Act) (MT).

[106] 'In Maltese tax law, residency is defined as a mix of physical presence in Malta and an intention to reside in Malta, as demonstrated by relevant facts.' Cilia (n 102).

[107] act, 'Taking up residence in Malta - EU/EEA/Swiss Nationals' (ACT 1_10_15_RES_EU) <www.act.com.mt/wp-content/uploads/2019/12/Taking-up-residence-in-Malta-EU-EEA-Swiss-Nationals-1.pdf> accessed 04 June 2022.

are renting real estate in Malta, get access to an exclusive tax regime. Accordingly, gains originating from foreign sources are subject to a flat rate of 15% tax, having a yearly tax liability of at least 15.000€.

Similarly, the Global Residence Programme[108] also focuses on awarding resident status in exchange for property investment, but targeting citizens from other countries not included in the Residence Programme and who are not long-term residents. This programme also carries the great advantage of allowing the applicants to freely travel within the Schengen Area.

With the goal of becoming an even more appealing jurisdiction for crypto investors, by facilitating the acquisition of resident status, Malta is planning to issue the Malta Permanent Residence Program (MPRP)[109]. The so-called residency-by-investment program looks into ventures in propriety and governmental contributions as means to obtain the permanent resident status. The associated benefits not only allow for an extended stay in the country but also access to the Schengen area under a Visa-free regime.

- **Portugal**

In Portugal, crypto assets find a particularly advantageous tax treatment. In this country, Personal Income taxes are not applicable to the income arising out of the sale of virtual currencies.[110]

Despite the seemingly favourable rule, there is however an exception applicable to cases where the sale is classified as a professional occupation or activity of the subject.

The local tax authority, *Autoridade Tributária e Aduaneira*, has issued binding information[111] regarding the fiscal treatment to be awarded to the gains deriving from the sale of crypto currencies, under the Personal Income Tax regime[112].

In this document, the authority further provides a short classification of these assets, clarifying that they must not be considered "coins" in the sense of a legal tender. However, it recognises the possibility of cryptocurrencies being subject to trade for real currencies, such as euro or

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[108] Office of the Commissioner of Revenue, 'Global Residence Programme Rules' <cfr.gov.mt/en/inlandrevenue/itu/Pages/Global-Residence-Programme-Rules.aspx> accessed 04 June 2022.

[109] Residency Malta Agency, 'Malta Permanent Residence Programme' <residencymalta.gov.mt/the-mprp-programme/> accessed 04 June 2022.

[110] 'Nomad List top European countries that are crypto tax friendly' *CoinTax List* (07 June 2022) <cointaxlist.com/blog/nomad-list-top-european-countries-that-are-crypto-tax-friendly> accessed 08 June 2022.

[111] Autoridade Tributária e Aduaneira, Ficha Doutrinária 5717/15 (27 December 2016) (PT).

[112] Decreto-Lei n.º 442-A/88, de 30 de Novembro (Diário da República 277/1988, 1º Suplemento, Série I de 1988-11-30) 2 - 35 (PT).

dollars, and thus having its value determined by online demand. Moreover, the document further provides the three situations which might potentially generate taxable gains: 1. trade of digital assets for real tender; 2. obtaining a commission for providing services related to crypto coins, or 3. gains deriving out of the sale of products or services paid for with cryptocurrencies. The Portuguese Tax Authority explores the possibility to include the gains deriving out of the trade of crypto assets for real tender, or other cryptocurrencies, under three different categories. The first as an asset increase, the second as capital income and the third as business income. However, in the same statement, it clarifies that it is not possible to include them under any of the three taxable categories, signifying that this activity is not subject to taxes under the Portuguese legal system.

Nonetheless, the Authority establishes the exception for situations when the trade constitutes a professional activity, thus being subject to the regular business income taxation regime.

- **Austria**

Austria's *Bundesministerium für Finanzen* (Ministry of Finance) has recently adopted legislation to define the tax treatment to be awarded to crypto currencies. The new tax regime is a landmark legislation in Europe.

This new regime, which targets only Austrian Tax residents, applies to the coins acquired after February 28th, 2022. Previously, a tax exemption was in place for situations when digital assets would be held for at least one year.

The country has declared that, from March 1st, 2022 onwards, gains from virtual assets shall be taxed as stocks, subject to a 27,5% tax rate applicable to reduced capital gains. The scope of "capital gains" refers to several actions, mainly the sale of crypto assets for Fiat money.

Crypto currencies will be subject to the aforementioned tax rate whenever they can be classified as yielding interest, within the meaning of § 27(3) of the Austrian Income Tax Act.[113]

The new law also sheds light on the categorisation of crypto as the Ministry classifies them as intangible assets and non-depreciable.[114] Nonetheless, for purposes of income tax assessment, crypto assets are to follow the same regime as other tangible assets, thus falling under the same applicable rate. However, if the assets are lent to other individuals or companies, they shall be

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[113] Bundesgesetz vom 7. Juli 1988 über die Besteuerung des Einkommens natürlicher Personen (Einkommensteuergesetz 1988 – EStG 1988) [1988] (Austrian Income Tax Act)(AT).

[114] Federal Ministry Republic of Austria Finance, 'Tax treatment of cryptocurrencies' (25 May 2022) <www.bmf.gv.at/en/topics/taxation/Tax-treatment-of-crypto-assets.html> accessed 08 June 2022.

classified as interest-bearing, therefore subject to a special rate under the Austrian Income Tax Act § 27a(1) and 27a(6).

On the other hand, if the assets cannot be classified as interest-bearing, a tax for speculative transactions is instead applicable, as per § 31 of the Austrian Income Tax Act, if the purchase and sale of the assets is done within one year.

Moreover, companies holding virtual currencies as business assets must include them on their balance sheets, as demanded by the Austrian Income Tax Act. The gains are determined by profit auditors who follow the assessment regulations imposed by the Austrian Commercial Code.[115] For tax purposes, holding these assets may lead to depreciation or favourable returns in the annual assessment.

In regards to mining of crypto assets, i.e. the production of the coins, it shall not be treated any differently from the creation of other goods, thus also subject to tax obligations.

Crypto Asset Service Providers (CASPs) in Austria will also be affected by this new legislation. With effect from January 1st, 2024, CASPs will be obliged to withhold taxes for its customers, thus becoming withholding agents.[116]

The goal of this tax reform seems to be to increase the trust in this asset class, by means of a tax treatment comparable to other securities.

4.2. U.S.A.

The United States has also been working towards establishing clear tax rules for the trade of crypto assets.

In 2014, the Internal Revenue Service (IRS) determined that the sale or any exchange of digital currencies is taxable, under the Notice 2014-21.[117] This notice, titled *Guidance on Virtual Currency*, serves the purpose of describing how general tax principles already in place are to be applied to cryptocurrencies transactions (Section 1. Purpose).

Accordingly, it was decided that crypto currencies would receive the same treatment as property, for federal tax purposes. Thus, the same rules applicable to property transactions are valid for

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[115] Bundesgesetz über besondere zivilrechtliche Vorschriften für Unternehmen (Unternehmensgesetzbuch – UGB) BGBl. I Nr. 114/1997 (Austrian Commercial Code) (AT).

[116] Ursula Rath, Thomas Kulnigg, Dominik Tyrybon, 'Blockchain & Crypto Currency Laws and Regulations 2022 | Austria' (2022) Global Legal Insights <www.globallegalinsights.com/practice-areas/blockchain-laws-and-regulations/austria> accessed 11 June 2022, para 1-2.

[117] Internal Revenue Service, CC:PA:LPD:PR (Notice 2014-21) (USA).

virtual currency trades. This correlation furthermore carries the burdensome obligation to attribute to crypto currencies a “fair market value” by means of determining the real value, in U.S. dollars, of the assets traded, on the respective day the transaction took place.[118]

Nonetheless, the IRS establishes some limits in the calculation of the value which is due. If the relevant crypto coins is held for over one year, the gains arising thereof will be subject to the normal capital gains tax rates. According to official sources, the normal tax rate for capital gains is lower than 15% for the majority of people, still with the possibility of reaching a rate of 0%, under certain conditions.[119]

On the other hand, if the cryptocurrency is held for one year or less, then general income tax rates apply instead. In the United States, federal tax rates are divided in seven brackets for the year of 2022, the lowest corresponding to 10% and the highest going up to 37%.[120]

Additionally, the IRS imposes further obligations upon those engaging in crypto transactions. Under Form 8949 taxpayers had to report their gains and losses obtained via the trade of stocks and equity.[121] From 2019, profits and damages caused by the sale of crypto assets must be reported, under the same Form. In this document, individuals must disclose extensive information about the trade, such as the amount and type of coin traded, the dates of acquisition and sale and the value earned or lost. Providing these details may prove itself especially complicated for investors using digital assets more regularly and for smaller acts of trade.

At a State level, also some changes have been adopted to increasingly clarify the status of crypto. As of May 2022, 37 states welcomed new bills regarding this type of asset, with some focusing on fiscal matters.[122]

Louisiana has proposed House Bill 741, which suggests the acceptance, by the Department of Revenue, of cryptocurrency as a means of payment of taxes or other outstanding payments to the State, such as fees or penalties.[123] The issue surrounding this proposal lies with the underlying possibility of classifying crypto assets as legal tender, which is forbidden under Article I, section

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[118] ‘Legal Issues Surrounding Cryptocurrency’ (n 30) para 7.

[119] Internal Revenue Service, ‘Topic No. 409 Capital Gains and Losses’ (19 May 2022) <www.irs.gov/taxtopics/tc409> accessed 11 June 2022.

[120] Internal Revenue Service, ‘IRS provides tax inflation adjustments for tax year 2022’ (IR-2021-219, 10 November 2021) <www.irs.gov/newsroom/irs-provides-tax-inflation-adjustments-for-tax-year-2022> accessed 11 June 2022.

[121] Department of the Treasury Internal Revenue Service, ‘Form 8949: Sales and Other Dispositions of Capital Assets’ (OMB No. 1545-0074, Attachment Sequence No. 12A, 2021) (USA).

[122] Roxanne Bland, ‘The State Tax Conundrum Of Cryptocurrency?’ *Forbes* (4 April 2022) <www.forbes.com/sites/taxnotes/2022/04/04/the-state-tax-conundrum-of-cryptocurrency/?sh=168496871175> accessed 11 June 2022.

[123] Louisiana House Bill No. 741, by Representative Wright (HLS 22RS-724, 2022 Regular Session) (USA).

10 of the Constitution of the United States. Accepting crypto coins as a means of payment could become a precedent to allow other payment methods which have so far not been allowed. Thus, this classification might hinder the possibility of passing the proposed Bill.

Similarly, Colorado aims to establish a system where tax obligations can be paid for with cryptocurrency, as advanced by the state's Governor Jared Polis.[124] This proposal has an innovative feature because, according to the Colorado Department of Revenue, it aims to tackle the issue of volatility of this asset type by fixating the exact exchange rate to which the transaction shall be subject. In this scenario, the risk of price depreciation is carried by a third-party, acting as a middleman in the transaction, and not by the State or the individual.

Furthermore, in Tennessee an interesting case took place around the issue of whether or not coins generated through proof-of-stake shall be included in the meaning of income for tax purposes. The case, from May 2021, brings a couple, Joshua Jarrett and Jessica Jarrett, against the United States.[125] The plaintiffs believed to have been wrongfully charged taxes on staking rewards obtained, arguing coins obtained through this method do not constitute income. In December of the same year, the U.S. Department of Justice declared that the couple was right and demanded the IRS to return the value paid.

Nonetheless, the innovative feature of this situation comes from the fact that the couple's intention was to use the case to establish case law, preventing similar future situations to be subject to unfitting taxes. Therefore, the *Jarretts* declined the payment and sought a court decision. However, on the 28th of February, 2022, the US Department of Justice issued a Motion to Dismiss, advising the Court to dismiss the complaint on grounds of lack of subject matter jurisdiction. At the time of writing, no more can be advanced on the case, which will surely become important for the matter of fiscal treatment of staking rewards.

4.3. Chapter conclusion

Looking at the approach adopted by the two regions we can find, once more, similarities and differences. Focusing first on the common points, it is possible to identify the effort to ensure legal certainty and the presence of more crypto tax-friendly areas within both regions. In what concerns

[124] Brandy Betz, 'Colorado to Accept Crypto for Tax Payments by End of Summer' *CoinDesk* (16 February 2022), <www.coindesk.com/policy/2022/02/16/colorado-to-accept-crypto-for-tax-payments-by-end-of-summer/> accessed 11 June 2022.

[125] *Jarrett et al v. United States of America* (Jarrett et al) [2021] 3:2021cv00419.

disparities, the main one focuses on the different categorization, for tax purposes, of this type of asset.
Regarding the efforts towards legal certainty, both the EU and the U.S. have sought to provide clarity regarding the fiscal treatment to be given to crypto assets. Crypto assets, due to their novelty, were left in a legal void that kept individuals in the dark regarding how to declare the gains deriving out of this type of investment. The different Member States, as well as the North American country, realized action was needed and introduced legislation clarifying how crypto assets should be taxed, either including them under the scope of an already existing taxation regime or creating a new one.
The second correlation showed us how, naturally, also when looking at fiscal matters, one can find jurisdictions which are more friendly towards crypto currencies, making it difficult to find one single approach to the topic. In the European Union, the autonomy Member States retain in fiscal matters leads some countries to have an especially favourable tax regime, depending on their overall views towards crypto assets. Also in the United States, despite the authority held by Federal laws, some States have adopted other types of measures that transpire their friendly approach to crypto.
In what concerns differences, as mentioned, the most relevant is linked with the contrasting ways in which crypto assets are categorized for tax purposes. In the United States there is a country wide concept where this asset type is treated as property. Contrastingly, in the EU, the opposite thing was done by excluding crypto assets from some categories without having, at least until now, assigned it to one single class. Member States followed distinct approaches to the situation and thus it is required to concentrate on each national jurisdiction in order to discern the fiscal regime in place. The European approach may be more burdensome for individuals who are taxpayers in more than one EU country, however the MiCA Regulation is expected to bring a more uniform solution.

5. AML and CTF rules

As pointed out in chapter 2, some of the issues arising out of crypto assets are related to security and financial crime, heightened by the potential anonymity of the users.

In fact, an estimate by Chainalysis, an analytics firm, indicates that Bitcoin was widely used for illicit activities in 2019, corresponding to values as high as 2.8 billion U.S. dollars.[126]
However, the anonymity associated with the parties to crypto transactions hinders the possibility to implement Know-Your-Customer (KYC) systems which allow companies to identify their users and are thus essential for AML regimes.[127]
As a response to this pressing issue, countries have adopted comprehensive measures to prevent its proliferation.

5.1. AML rules vs. rules preventing Terrorism Financing

Money Laundering issues are commonly tackled together with Terrorism Financing, however a clear distinction must be made between the two. As stated by the International Monetary Fund (IMF), fighting both types of crime helps achieve common goals such as preserving the financial integrity and stability worldwide, blocking criminals from accessing their assets and avoiding any potential benefit from illicit activities.[128]
Nonetheless, despite the coinciding goals, the rules fighting each of these criminal areas are distinct.

- **Money laundering**

  Money laundering consists of the effort to hide the criminal origin of money arising out of any type of illicit activity or crime.[129] The proceeds may come from any crime, such as human trafficking, drug-related crimes, corruption, among several others.

[126] Mike Orcutt, 'Criminals laundered $2.8 billion in 2019 using crypto exchanges, finds a new analysis' *MIT Technology Review* (16 January 2020) <www.technologyreview.com/2020/01/16/130843/cryptocurrency-money-laundering-exchanges/#:~:text=Expand%20menu-,Criminals%20laundered%20%242.8%20billion%20in%202019%20using%20crypto%20exchanges%2C%20finds,to%20blockchain%20analytics%20firm%20Chainalysis> accessed 12 June 2022.
[127] Daniel Holman, Barbara Stettner, 'Anti-Money Laundering Regulation of Cryptocurrency: U.S. and Global Approaches' (2018) International Comparative Legal Guide to Anti Money Laundering 2018, 1 <www.allenovery.com/germany/-/media/sharepoint/publications/publications/en-gb/documents/aml18_allenovery.pdf > accessed 12 June 2022.
[128] International Monetary Fund, 'The Fund's involvement in AML/CFT', para 1 <www.imf.org/external/np/leg/amlcft/eng/aml1.htm> accessed 15 June 2022.
[129] Ibid, para 2.

As clarified by the IMF, according to the Vienna Convention[130] and the Palermo Convention[131], money laundering activities could mainly refer to one of the following criminal conducts : 1. transfering or converting money while being aware that the funds arise from illicit activities; 2. hiding or covering elements related to the funds illicitly obtained, such as their nature, source, location, amongst others; and 3. acquiring, possessing or using money while being aware of its criminal origin.

Likewise, Anti Money-Laundering rules focus on trying to uncover the origin of the funds used, as a means to prevent the money obtained from entering the financial system and becoming untraceable in a way that allows criminals to profit from their activities.

Since money laundering issues may expand beyond borders, there has been joint effort by the international community to establish standards to fight it. As such, in 1989 during the 15th G-7 Summit in Paris, the Financial Action Task Force on Money Laundering (FATF) was created , an international policy-making body, composed of 33 members.[132]

- **Terrorism Financing**

Unlike for money laundering, in terrorism financing the focus is not on the origin of the funds but instead to their use. The IMF clarifies that funds used with the intention to sponsor terrorist activities or groups fall within the scope of terrorism financing. As such, the origin of money used for terrorism financing might be licit or illicit, because the true intent is hiding act of financing.

As explained by the IMF, there are combined efforts that fight both money laundering and terrorism financing, as both can be seen as a threat to the stability of the financial sector. The methods employed to prevent any of the two situations aim at preventing, detecting and punishing illicit earnings from becoming part of the financial system and sponsoring terrorism. As such, these rules rely on the possibility to trace back and identify criminal activities and individuals through the financial trail. Therefore, it is crucial to have tools in place which allow the transparency of financial transactions in order to uncover doubtful occurrences.

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[130] United Nations Convention Against Illicit Traffic In Narcotic Drugs And Psychotropic Substances (Vienna, 20 December 1988).

[131] United Nations Convention against Transnational Organized Crime (Palermo, 08 Janurary 2001).

[132] FATF, 'Who we are' <www.fatf-gafi.org/about/> accessed 13 June 2022.

The use of cryptocurrencies highly potentiates the occurrence of money laundering activities due to the anonymity of the holders of the assets. Therefore, anti-money laundering rules and countering terrorism financing rules had to be adapted to also apply to this new asset type.
Due to the need to tackle and regulate these financial crime issues, both the European Union and the U.S.A have taken measures and adopted legislation in this regard.

5.2. EU

The European Union has recognised the need to tackle money laundering activities for a long time, having introduced in 1990 the first anti-money laundering Directive.[133] This pioneer document had the goal to inhibit the exploitation of financial institutions or structures through mechanisms of money laundering. The Directive was beneficial mainly to banks, but also any other organization tied to the economic field, such as casinos, lawyers, real estate agents, accountants and others.
The Directive set forth several obligations which affected institutions must comply with, mostly tied around establishing a strong standard of due diligence for customers or investors. Such obligations can be fulfilled by keeping a clear record of transactions, establishing monitoring and reporting mechanisms for doubtful occurrences, setting up customer authentication methods to guarantee the identity of the investors, and any others that potentiate transparency.
Since the 90s this Directive has suffered alterations and improvements to keep up with financial developments. In 2015, the 4th anti-money laundering Directive[134] was adopted, with the view to rejuvenate the outdated version, together with Regulation 2015/847 on information on the payer accompanying transfers of funds. As clarified by the European Commission, the two instruments have been drafted in the light of the recommendations proposed by the FATF in 2012.[135] These recommendations introduced comprehensive international standards which should be implemented by countries, taking into account their particular political or financial situation, to support

[133] Commission, 'Anti-money laundering and countering the financing of terrorism' <ec.europa.eu/info/business-economy-euro/banking-and-finance/financial-supervision-and-risk-management/anti-money-laundering-and-countering-financing-terrorism_en> accessed 13 June 2022.
[134] Directive 2015/849 of the European Parliament and of the Council of 20 May 2015 on the prevention of the use of the financial system for the purposes of money laundering or terrorist financing, amending Regulation (EU) No 648/2012 of the European Parliament and of the Council, and repealing Directive 2005/60/EC of the European Parliament and of the Council and Commission Directive 2006/70/EC [2015] OJ L 141 (AMLD 4).
[135] FATF, *International Standards on Combating Money Laundering and the Financing of Terrorism & Proliferation*, (2012-2022, FATF, Paris, France).

their fight against money laundering and terrorism financing. The FATF recommendations were recently updated, in March 2022, but went through several alterations throughout the years.
More recently, in June 2018, the Directive was once more amended with the introduction of the 5th anti-money laundering Directive (Directive 2018/843).[136] This amendment brought in improvements to the former version, such as by enhancing transparency through the adoption of public registers for companies, amplifying the powers of the EU Financial Intelligence Units and increasing the cooperation between financial supervisory authorities.
Most importantly for the study at hand, the 5th AML Directive introduced new limits to the anonymity connected with crypto assets and wallet providers. As explained in the *Factsheet on the main changes of the 5th anti-money laundering Directive*[137] the new amendment extended the anti-money laundering and counter terrorism financing rules to virtual currencies. These rules became applicable to service providers responsible for holding, storing and transferring crypto currencies. Thus, these entities must ensure identifiability of their users or customers and have to communicate all doubtful transactions. The 5th AML Directive had to be implemented by the Member States into their national legislation until January 10th, 2020.
As seen, the European Commission started realizing the importance of having strong AML rules in place to tackle the anonymity issue tied to crypto assets around the year 2018.
Nonetheless, other European and international entities, namely the ESMA, EBA and FATF have expressed their common concern claiming that the applicability of the Directive shall be extended as to include other institutions or companies engaging in the crypto industry, particularly providers of exchange services between crypto assets and traditional currencies, and providers of financial services for ICOs.[138] The ESMA, in its *Advice on Initial Coin Offerings and Crypto-Assets*(2019)[139], has approached its concerns, and agreed with the EBA's 2014 *Opinion on Virtual Currencies*[140] and the FATF recommendations of October 2018, on the matter of extending the application of AML rules to more players.
The EBA proclaimed that European legislators should take into consideration other market participants acting as middle ground for the exchange between traditional currencies and crypto assets

136 Directive 2018/843 of the European Parliament and of the Council of 30 May 2018 amending Directive (EU) 2015/849 on the prevention of the use of the financial system for the purposes of money laundering or terrorist financing, and amending Directives 2009/138/EC and 2013/36/EU [2018] OJ L 156.
137 Věra Jourová, 'Strengthened EU rules to prevent money laundering and terrorism financing' (Fact Sheet, 09 July 2018).
138 Ferrari (n 55) 329.
139 European Securities and Markets Authority (n 11) 36.
140 European Banking Authority (n 12).

and turn them into *obliged entities* under the EU AML Directive. This amplification would, according to the EBA's understanding, shield regulated financial services from the risks tied to the interaction with virtual currencies schemes. Moreover, the broadening would also strengthen the possibilities of virtual currencies schemes to unfold in a way which meets the established AML regulatory requirements.[141] The EBA further explained that it is essential to establish an equal playing field in the market for both traditional and virtual currencies. Accordingly, inequality would lead to a decrease of the intensity of market competition and financial service providers would abandon the fiat currency markets. The EBA's concerns were taken into account and the 5th AML Directive included providers of virtual currencies, fiat money and custodian wallets all within the scope of *obliged entities*. As explained by the European Commission, *obliged entities* have to necessarily comply with all AML/CFT rules, such as customer due diligence, and proceed to report any suspicious activities to the FIUs, thus facing more burdensome obligations.[142] Most financial institutions, such as banks, investment firms and payment service providers, were already included in the scope of *obliged entities* under the 4th AML Directive. The novelty brought by the current Directive, which is relevant for the current study, is the inclusion of all categories of Crypto-Asset Service Providers (CASPs) under the definition.

Following a similar thought process, the ESMA also expresses its view that all virtual currencies and associated activities should be under the scope of AML rules.[143]

The FATF recommendations furthermore approach the topic of supervision of Virtual Assets Service Providers (VASPs) to ensure the correct application of national AML and CFT rules. Thus, the FATF indicates that countries shall have in place proper effective and proportional sanctions applicable to VASPs, and also their directors and senior managers, for failure to comply with AML or CFT rules.[144]

Despite the significant progress in the fight against money laundering introduced by the 5th AML Directive, on July 21st, 2021, the European Commission announced its intention to launch a new

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[141] ibid 6.

[142] Commission, 'Questions and Answers: Anti-Money Laundering and Countering Financing of Terrorism (AML/CFT)' (Brussels, 20 July 2021) <ec.europa.eu/commission/presscorner/detail/en/QANDA_21_3689> accessed 15 June 2022.

[143] European Securities and Markets Authority (n 11) 5.

[144] FATF (n 135) 76 - 77.

comprehensive set of four legislative proposals to increase the level of protection against this type of crime.[145]

One of the proposed initiatives is to establish a supranational AML/CFT Authority, as announced on the official proposal, to ensure the correct application of the relevant laws in this field.[146] In the Proposal, the Commission recognises the need to carry on reforms in the areas of supervision and cooperation to detect doubtful activities and transactions, as well as fill any gaps that might have been left open by national authorities and exploited by criminals. The Commission hopes that having one single authority at European level will increase the cooperation of the different financial intelligence units.

The Commission has also published the proposal for a new AML Directive to be implemented by the Member States.[147] The 6th AML Directive is expected to replace the current one (Directive 2015/849/EU) and introduce adaptions to accommodate the upcoming EU AML authority and rules on financial intelligence units.

Moreover, the Commission plans to issue a regulation focused on the private sector to guide companies on how to correctly implement all AML and CFT obligations. According to the Proposal[148], the legislation will consist of directly applicable rules, also for customer due diligence and beneficial ownership, as well as introduce a limitation on cash payments, applicable in the entire EU, of ten thousands euros.

Lastly, the proposed revision of the Transfer of Funds Regulation[149] (TFR) is expected to include VASPs into its scope, making crypto transactions subject to the so-called "travel rule", as recommended by the FATF. The current TFR[150] was adopted in 2015, with the clear objective of preventing payment systems from being subject to criminal activities, such as money laundering or terrorism financing, originally applicable only to traditional payment systems.

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145 Directorate-General for Financial Stability, Financial Services and Capital Markets Union, 'Anti-money laundering and countering the financing of terrorism legislative package' (20 July 2021) <ec.europa.eu/info/publications/210720-anti-money-laundering-countering-financing-terrorism_en> accessed 15 June 2022.

146 Proposal for a Regulation of the European Parliament and of the Council establishing the Authority for Anti-Money Laundering and Countering the Financing of Terrorism and amending Regulations (EU) No 1093/2010, (EU) 1094/2010, (EU) 1095/2010 [2021] COM/2021/421 Final.

147 Proposal for a Directive of the European Parliament and of the Council on the mechanisms to be put in place by the Member States for the prevention of the use of the financial system for the purposes of money laundering or terrorist financing and repealing Directive (EU) 2015/849 [2021] COM/2021/423 final.

148 Proposal for a Regulation of the European Parliament and of the Council on the prevention of the use of the financial system for the purposes of money laundering or terrorist financing [2021] COM/2021/420 final.

149 Proposal for a Regulation Of The European Parliament And Of The Council on information accompanying transfers of funds and certain crypto-assets (recast) [2021] COM/2021/422 final.

150 Regulation (EU) 2015/847 of the European Parliament and of the Council of 20 May 2015 on information accompanying transfers of funds and repealing Regulation (EC) No 1781/2006 [2015] OJ L 141.

The “travel rule”, as proposed by the FATF, introduces obligations to share all relevant information on virtual currencies transactions, as a means to mitigate the risk of criminal and terrorist misuse of the financial system.[151] The objective sought by this rule is to increase traceability of crypto transactions, in the same manner already done for traditional currencies and electronic money. If the proposal to include this rule in the TFR goes forward, it would force VASPs/CASPs to indicate the originators and beneficiaries of all transactions, which implicates a great effort to process, store and communicate all data to authorities. By including the transfer of crypto assets under the scope of the TFR, virtual currencies transactions would be subject to deep scrutiny, leading some providers to strongly oppose this proposal. Their arguments are that this would hinder innovation and subvert self-hosted wallets used by individuals for their crypto assets. Recently, on June 30th, 2022, the FATF issued a communication reinforcing the need for all different jurisdictions to adopt the “travel rule” and stating its availability to further discuss implementation issues.[152]

The European Commission points out that the next steps are still under discussion by the European Parliament and Council. It is expected that in 2024 the AML authority becomes operational and soon after should start its supervisory tasks, as soon as the 6th AML Directive has been incorporated into national legislations.[153]

5.3. U.S.A.

In 2020, the United States introduced the Anti-Money Laundering Act (AMLA)[154], which constitutes the biggest reform in the U.S. AML framework since 2001, when the USA Patriot Act was enacted.[155] As provided by the FinCEN, the *Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001*[156], also known as USA

[151] FATF, ‘Targeted Update on Implementation of the FATF Standards on Virtual Assets/VASPs’ (2022, Paris, France).
[152] ibid 10.
[153] Directorate-General for Financial Stability, Financial Services and Capital Markets Union (n 145).
[154] The Anti-Money Laundering Act of 2020 [2020] (AMLA).
[155] Marc-Alain Galeazzi, Barbara Mendelson and Malka Levitin, ‘The anti-money laundering act of 2020’ (2021) Vol. 22 No. 3, Journal Of Investment Compliance, 253.
[156] Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001 (Public Law 107–56—OCT. 26, 2001) (USA Patriot Act).

Patriot Act, was drafted with the purpose of hindering any terrorist attempt and punishing it accordingly. Moreover, the Act sought to improve law enforcement and prevent, uncover and bring action against money laundering efforts.[157]

The AMLA of 2020 came as a response to the several demands to improve the legal framework of AML and CFT in the United states. The legislative piece was drafted with the goal to rejuvenate the system and shift the direction of U.S. laws into a more global approach, focused on fighting all kinds of financial crime.[158]

As relevant for this study, the AMLA expanded the scope of the Bank Secrecy Act (BSA) by making it, from then on, applicable to any virtual assets providers, as well as established new penalties for breach of BSA rules. Nonetheless, as analysed on chapter 3.2., in the United states crypto assets are classified differently depending on the entity or regime. Thus, the applicability of AML rules as predicted in the BSA, largely depends on whether the activity carried out involving crypto currencies can be inserted within the scope of "financial institutions", as provided by the same Act. Nonetheless, most of the activities carried out by virtual currency exchanges or crypto issuers and wallet providers can be included within the scope of the BSA and thus subject to the AMLA.

The AMLA regulates several aspects, such as expanding the regulatory oversight of FinCEN, the establishment of clear national AML objectives, penalties for hiding information and rules on how to share it with foreign financial entities. The most relevant advances brought by the AMLA are the updated Customer Due Diligence Rule (CDD Rule), the improvement of the beneficial ownership system, together with the creation of a FinCEN database for keeping all information on legal entity customers.

The Act encompasses also the Corporate Transparency Act (CTA), which authorises the FinCEN to gather information regarding beneficial ownership and communicate it to the relevant authorities, including law enforcement agents. The type of information to be gathered is constituted by the name, home address, ID number, and other relevant data reporting to the beneficial owner. The Beneficial Ownership Information (BOI) is then kept for five years minimum, and remains completely confidential. Any BOI is only disclosed if an appropriate request from an authorised authority is made.

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157 Financial Crimes Enforcement Network, 'USA Patriot Act' <www.fincen.gov/resources/statutes-regulations/usa-patriot-act> accessed 17 June 2022.

158 'Four takeaways on BSA/AML reform under the Anti-Money Laundering Act of 2020' *Thomson Reuters* (09 August 2021) <https://legal.thomsonreuters.com/en/insights/articles/4-takeaways-on-bsa-aml-reform> accessed 17 June 2022.

Under the AMLA, beneficial owners are individuals who either: 1. have considerable control over and entity, or 2. own at least 25 percent of the ownership interests of an entity, or have control over it.[159] According to the 2020 Act, "reporting companies" must share the BOI with FinCEN, which is kept in a secure private database. The FinCEN identifies two types of "reporting companies": domestic, which includes any type of company or entity officially created according to the law of a state or Indian tribe, and the second type, foreign which encompasses entities formed according to the Law of foreign country.[160] Nonetheless, this solution still presents a problem which is that several legal entities are not included under the definition of Reporting Company, thus there is no information flow regarding those.

Congress highlighted how these reporting obligations are meant to improve transparency over transactions and to uncover illicit activities, in light of the multitude of companies created every year in the U.S. who are not forced to adhere to AML rules by their states.[161]

Lastly, changes on the Customer Due Diligence (CDD) process were introduced by the CTA, which now requires the Treasury to go over the rules currently in place for financial institutions. Within one year, financial institutions must eradicate any CDD requirements which are already included in the new reporting obligations for beneficial ownership, to avoid double work and overload of information. The new CDD rule imposes that companies must identify and verify their customers' identity, which already includes any Beneficial Owner.

5.4. Chapter conclusion

Both in the European Union, as well as in the United States, the rise in the use of crypto currencies was accompanied by the rising concern about its potential use in money laundering activities or terrorism financing. Given the cross-border impact these type of financial crimes possess, it was quickly understood that a collective international effort was required by legislators. Starting from the year 2018, national authorities started to dig deeper into the concrete measures which should be taken to prevent the misuse of crypto assets for criminal ends.

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159 Galeazzi (n 155) 254.
160 Financial Crimes Enforcement Network, 'Fact Sheet: Beneficial Ownership Information Reporting Notice of Proposed Rulemaking (NPRM)' (07 December 2021) <www.fincen.gov/news/news-releases/fact-sheet-beneficial-ownership-information-reporting-notice-proposed-rulemaking > accessed 15 June 2022.
161 Galeazzi (n 155) 254.

Influenced by the FATF's actions against money laundering and terrorism financing, both regions compared in this study have adopted concrete legislative measures in order to tackle the corruption of the financial system by issuing AML and CTF rules. As recommended by the FATF, national legislators have extended the same treatment awarded to traditional currencies to digital assets or created adequate updated rules.

Moreover, the European Union and the U.S. have realised that alongside building a consistent legal framework, establishing authorities to enforce and supervise the applicability of the adopted rules is essential.

The countries have realised the way to overcome the issue of anonymity associated with crypto currencies is through record keeping and the establishment of disclosing obligations to the appointed authorities, guaranteeing at least a minimum of transparency which would allow these entities to trace back transactions in case of suspicious activities.

As such, when comparing the U.S to the EU Member States, it is possible to identify a similar evolution and a movement towards the same direction of fighting and eradicating to the maximum the misuse of digital assets for criminal ends.

6. Outlook for crypto assets legal treatment

In light of the growing questions surrounding the topic of crypto assets, legislative entities have realised the need to provide certainty on the legal treatment given to them. Therefore, more and more, countries have started not only expanding the scope of existing laws to accommodate crypto currencies, but most importantly drafting legal frameworks to specifically address this asset class.

Specifically in the European Union, the European Commission has disclosed in 2020 that it will issue the Markets in Crypto-Assets Regulation (MiCA Regulation), as part of a digital finance package, which will bring major breakthroughs in guaranteeing an uniform treatment of the assets within the Union.

On the other side, the United States have two important cases under appreciation which might define the case law for the future, as well as a recent Executive Order, issued by current President Joe Biden, focusing on crypto assets.

6.1. European Union: MiCA Regulation

As seen so far, Member States largely detain the authority to decide which legal treatment to award to crypto assets, with some jurisdictions choosing more favourable approaches than their neighbours.

However, a very important turning point is expected regarding the establishment of an uniform legal framework for crypto assets with the upcoming Markets in Crypto-Assets Regulation. Some authors affirm that the European Commission's choice to legislate on the topic of digital currencies using a regulation as the legal instrument, strongly highlights how serious the EC is in its regulatory intentions.[162]

On the 24th of September, 2020, the European Commission (EC) published the Digital Finance package[163], which includes legislative proposals on virtual assets to boost the EU's competitiveness on the financial sector by allowing investors to access "innovative financial products", without compromising consumer protection and financial stability. The European Commission seeks to embrace digital financial services with a view to modernise the European economy.

As part of the package, the EC issued a Digital Finance strategy[164] with four clear priorities: 1. eliminate discrepancies in the digital single market; 2. promote regulations which boost digital innovation; 3. advocate for a data-driven finance; and 4. focus on the risks which come with digital transformation without compromising digital operational resilience.

In line with the goals of the package and the clear set of priorities, the EC has announced its intention to bring forward a comprehensive legislative framework provided by the MiCA Regulation. The EC has said that the new legislation will only affect those digital assets which are not yet covered by other EU laws. Assets which do not fall under the scope of any pre-existent regulation, such as stable coins, will be subject to a tailored approach. Furthermore, the Commission has already allowed for an anticipated definition of virtual currencies by saying these are digital representations of values or rights, that are transferred and stored electronically.

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[162] Dirk A Zetzsche and others, 'The Markets in Crypto-Assets regulation (MiCA) and the EU digital finance strategy' (2021) Volume 16, Issue 2, Capital Markets Law Journal, 203.

[163] Directorate-General for Financial Stability, Financial Services and Capital Markets Union (n 99).

[164] Commission, 'Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on a Digital Finance Strategy for the EU', (Brussels, 24 September 2020) COM(2020) 591 final.

From what can be anticipated from the text of the proposal for MiCA Regulation[165] and the EC's statement[166], the new legislation will bring strict requirements for crypto issuers and service providers within the EU.

The MiCA Regulation starts by defining its scope and definitions, followed with a comprehensive list of key-terms and definitions, such as for crypto assets, or other related tokens which will become subject to licensing - e-money tokens[167] (EMT) and asset-referenced tokens[168] (ART). The following titles, II to IV, focus on the core rules governing crypto issuers. While Title III establishes rules for asset-referenced token issuers, Title IV targets e-money tokens. Title II, therefore, provides general rules for assets which do not integrate titles III or IV, such as utility tokens or non-financial instruments. As it seems, stricter control will be exercised over asset-referenced and e-money tokens, for which licensing will be required, as opposed to tokens falling under the scope of Title II, which will only be subject to heightened disclosure demands.

On the other hand, Title V establishes rules on the authorisation and operating requirements for some crypto service providers. Following, Title VI tackles market abuse, while Title VII provides rules on supervisory powers of several institutions. As such, national competent authorities shall be in charge of supervising EMTs and ARTs issuers together with the European Banking Authority, who jointly holds supervisory competence over significant tokens. Moreover, MiCA will require EBA to keep an updated public register of any non-compliant CASPs.

The two final titles focus on legislative techniques.

The MiCA Regulation will furthermore cover other issues associated with virtual currencies, such as forcing different actors acting in the crypto world to disclose their environmental and climate footprint. One important topic which will be left out of the upcoming regulation is any AML consideration, as that will be extensively covered by its own dedicated AML Directive.

Despite all the on-going discussion, the outcome of MiCA is still not fully determined and the drafts currently available do not provide full insight into the lengths the regulation will go to differentiate its applicability from EU securities laws. Some authors point out that MiCA Regulation

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165 Commission, 'Proposal for a Regulation of the European Parliament and of the Council on Markets in Crypto-assets, and amending Directive (EU) 2019/1937' (Brussels, 24 September 2020) COM(2020) 593 final 2020/0265(COD).

166 Directorate-General for Financial Stability, Financial Services and Capital Markets Union (n 99).

167 As proposed by Article 3(4) MiCA Regulation (n 165): " *'electronic money token' or 'e-money token' means a type of crypto-asset the main purpose of which is to be used as a means of exchange and that purports to maintain a stable value by referring to the value of a fiat currency that is legal tender*".

168 As proposed by Article 3(3) MiCA Regulation (n 165): " *'asset-referenced token' means a type of crypto-asset that purports to maintain a stable value by referring to the value of several fiat currencies that are legal tender, one or several commodities or one or several crypto-assets, or a combination of such assets.*".

is also missing a systematic approach to EU law, which is commonly found in other European laws.[169]

On a Press release from June 30th, 2022, the Council of the European Union announced that an agreement was reached on the MiCA Regulation.[170] The Council presidency has reached a provisional agreement with the European Parliament on the proposal for MiCA. This agreement is still subject to approval by both the Council and the Parliament prior to the formal adoption procedure. On November 2021, the Council adopted the negotiating mandate on MiCA, which was followed, on March 2022, by trilogues between the co-legislators, leading up to the current agreement.

The Regulation is expected to go into force in 2024.

6.2. USA

The future of crypto assets legal treatment in the U.S. will be built by political orders, legislative measures and court decisions.

Currently, we are looking at two important elements which are expected to stimulate developments in the matter of how digital currencies are treated and classified in the U.S.: one Executive Order and two important court cases. In the United States, judicial sentences have an added relevance when compared to the European Union framework, as these constitute Case Law, shaping cases to come.

6.2.1. Executive Order on Ensuring Responsible Development of Digital Assets

In March 2022, the current U.S. President, Joe Biden, has issued an Executive Order on Ensuring Responsible Development of Digital Assets.[171] This Order is meant to lead different government agencies and departments to provide answers regarding some of the most important issues surrounding crypto assets.

Breaking it down, as further elaborated by the American Bar Association, executive orders are not legislation *per se,* since they do not require approval by Congress. These are directives from the

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[169] Zetzsche (n 162) 221.

[170] Council of the European Union, 'Digital finance: agreement reached on European crypto-assets regulation (MiCA)' (Press Release, 30 June 2022) <www.consilium.europa.eu/en/press/press-releases/2022/06/30/digital-finance-agreement-reached-on-european-crypto-assets-regulation-mica/> accessed 06 July 2022.

[171] 'Executive Order on Ensuring Responsible Development of Digital Assets'(Presidential Actions, 09 March 2022) <www.whitehouse.gov/briefing-room/presidential-actions/> accessed 07 July 2022 (USA).

President to manage or guide the operations of the federal government in the United States, however they do hold the force of law.[172] For this reason, executive orders are codified under Title 3 of the Code of Federal Regulations and may only be overturned by the U.S. President, via yet another executive order seeking that goal.

Bearing in mind that States hold the power to regulate the treatment awarded to crypto assets, while they are classified as money services businesses or money transmitters, as explored in chapter 3.2, this Executive Order could lead to a more uniform approach throughout the country.

The Executive Order starts by recognising the "dramatic growth in markets for digital assets", which is accompanied by several concerns over consumers protections, criminal activities, environmental issues, financial stability, just to name a few. Section 1 goes on to address the massive market capitalization generated by digital assets, reaching 3 trillion U.S. dollars in November 2021. In the same section, it is further stated that the increasing development and use of crypto currencies, combined with inconsistent controls to tackle the associated risks, calls for an evolved and aligned approach by the Government.

Section 2 of the Executive Order focuses on its objectives, which are divided in six points: 1. to protect consumers and businesses; 2. to protect the U.S.'s and the global financial stability; 3. to mitigate financial crime and national security concerns; 4. to reinforce the U.S.'s leadership in the global financial system, also through the responsible development of crypto assets; 5. to promote access to safe and affordable financial services; and 6. to support technological advances which foster a responsible advancement and adoption of crypto currencies.

Furthermore, section 3 addresses how the coordination to enforce the Executive Order shall take place, while section 4 dictates the policy and actions concerning the U.S. Central Bank Digital Currencies (CBDC). Section 4 importantly highlights that "sovereign money is at the core of a well-functioning financial system", therefore any attempt at a CBDC should be accompanied by a thorough assessment of all risks and benefits.

All concerns regarding consumers, businesses and investors protection are addressed on Section 5, including the risks of criminal activity in the form of fraud, data breaches, cyber security, among others. Section 6, on the other hand, focuses on the measures to foster financial stability and reinforce market integrity, which implicate the strong cooperation with several authorities which should exercise overseeing functions. It is followed by Section 7, which addresses the actions to

[172] American Bar Association, 'What Is an Executive Order?' (25 January 2021) <www.americanbar.org/groups/public_education/publications/teaching-legal-docs/what-is-an-executive-order-/> accessed 07 July 2022.

restrict illicit financial activities and national security risks, caused by the heightened potential to commit cybercrimes found by criminals in the use of digital currencies. Section 8 provides guidance on the matter of improving international cooperation and U.S. competitiveness, which also implicates a strong international collaboration towards establishing strong AML/CFT rules.
Lastly, the Executive Order provides definitions of key terms, which might influence the way these assets and associated elements will be classified in the future.
Nonetheless, real developments in light of this Executive Order are still to be recorded, therefore it is only possible to speculate about the implications it will bring to the future of crypto assets. Despite all that, one may confidently say that this is one important step towards the consolidation of crypto currencies in the American financial system.

6.2.2. Case Law

Two important cases concerning the topic of the possible categorisation of crypto currencies as securities have been running in U.S. courts: *Securities and Exchange Commission v. Ripple Labs Inc.* and *Underwood v. Coinbase Global, Inc., et al.*. These two proceeding are expected to bring significant developments in the matter of the classification of virtual currencies and will shape of the future legal treatment awarded to this asset type.
Ultimately, the classification as securities or not is tied to the criteria established in the U.S. Supreme Court case from 1946 *Securities and Exchange Commission v. W.J. Howey Co.*, as explored in chapter 3.2.
During the proceedings, other issues tied with digital assets might arise and provide further developments and clarity on how the assets will be treated by American courts from now on.

- **Securities and Exchange Commission v. Ripple Labs Inc..**

The case *Securities and Exchange Commission v. Ripple Labs Inc. Ripple Labs Inc*[173]. revolves around the possible classification of digital assets as securities by the SEC. For the purposes of the current comparative study, focus will only be given to the discussion surrounding the classification of the assets in question.

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[173] United States District Court Southern District Of New York [2020] *Securities and Exchange Commission V. Ripple Labs, Inc., Bradley Garlinghouse, and Christian A. Larsen* (Ripple Case) Case 1:20-cv-10832.

Ripple, an U.S. start-up company, was accused by the SEC, in December 2020, of committing nine violations of the Securities Act of 1993, for profiting from unregistered sales of XPR, one of the biggest crypto currencies worldwide. XPR[174] is a digital asset, built by Ripple, and the company argued in court that it is a decentralised digital currency, similarly to Bitcoin.

The main question coming out of this trial is whether XPR should receive a classification similar to other digital coins, or instead a treatment similar to investment contracts, such as stocks. Ripple's defence is based on the argument that XPR cannot be classified as a security and the SEC possesses no authority to regulate it as such. Moreover, Ripple argued that the SEC never ordered the company to register XPR as a security and actually, in previous occasions, the SEC had the possibility to issue an opinion on whether the coin could be classified as a security, and nothing was said.[175]

On the other hand, the SEC declares that XPR does not possess decentralised qualities, given it is fully controlled by Ripple, unlike other currencies, like Bitcoin or Ethereum, which are controlled in a decentralised manner through mining performed by several people, and should thus have a different treatment.

The outcome of this case will most likely set a precedent to the possibility of centralised crypto coins to be classified as securities by the SEC and the different treatment awarded to decentralised assets.

As of now, July 2022, there was no conclusion to the dispute.

- **Underwood v. Coinbase Global, Inc., et al.**

Another important case, filed in October 2021, is *Underwood v. Coinbase Global, Inc., et al.*[176] which, similarly to the Ripple Labs case, centres around the issue of how to classify crypto currencies. This case opposes three different plaintiffs bringing forward a class action against Coinbase Global Inc. (Coinbase), an online platform which allows the investment in crypto assets.

[174] Ripple <ripple.com/xrp/> accessed 08 July 2022.

[175] Penny Crosman, 'Can ripple labs beat the SEC in court?' *American Banker* (New York, N.Y., 20 July 2021) <www.proquest.com/docview/2553124419?pq-origsite=primo> accessed 08 July 2022.

[176] United States District Court Southern District Of New York [2022] *Christopher Underwood, Louis Oberlander, and Henry Rodriguez on behalf of themselves and all others similarly situated V. Coinbase Global, Inc., Coinbase, Inc., And Brian Armstrong* (Coinbase Global case) Case No. 1:21-cv-08353-PAE.

The issue under dispute is based on the allegations by the plaintiffs that Coinbase is breaching federal and statal securities laws by offering several tokens in its website which should be classified as securities, while lacking the necessary registration as an exchange or broker-dealer.[177] For the purposes of this study, relevance will only be given to the discussion surrounding the classification, or not, of digital assets as securities.

The plaintiffs case is built on the reasoning that due to the fact that the tokens in question are issued in initial coin offerings, their value is dependent on the managerial efforts of those running the issuer, similarly to other securities such as stocks. Differently to traditional securities, crypto currencies' value, due to their decentralised feature, depends on supply and demand. Furthermore, the argument is supported by the claim that Coinbase should have registered the tokens as securities with the SEC, otherwise investors cannot access the relevant documents which accompany securities and allow purchasers to make informed decisions on how the managerial efforts will be carried out.

The outcome of the case is still undetermined at the time of writing, nonetheless the decision will dictate how this type of token is classified under security laws.

6.3. Chapter conclusion

Comparing the outlook of the expected legal framework for crypto assets in the European Union and the United States, we find similar motivations and concerns but fairly different methods.

Both regions have recognised and addressed that there are several risks associated with the use of digital currencies and the best way to tackle this would be through providing a clear legal framework.

The EU has chosen a collective approach that guarantees clarity and uniformity throughout the different Member States, by adopting proper extensive legislation by the means of a Regulation. The outcome of this approach will guarantee that every Member State will have the same legal framework for virtual currencies, for the matters covered by the Regulation, ensuring that throughout the Union digital assets are classified in the exact same manner and there are no discrepancies in treatment.

[177] ibid 9.

Differently, in the United States, courts have strong influence because judicial decisions set a precedent which will shape the outcome of future cases. As such, the two cases focusing on the discussion of whether or not digital assets can be classified as securities will set a strong precedent which will determine if these will be subject to securities laws, or not. Furthermore, in the U.S. the President may issue Executive Orders, with power of law, which call several federal institutions to action, demanding them to provide answers regarding important issues related to digital currencies. Nonetheless, this Executive Order might be overturned by the next President, should their view on the matter diverge.

Thus, one can conclude that the treatment awarded to virtual currencies in the United States is more volatile and subject to judicial decisions and political views, which carries a certain degree of uncertainty. On the other hand, in the European Union, once the MiCA Regulation comes into force, it will be adopted by all Member States and not subject to change.

What is, nonetheless, common between the two regions under comparison, is that in both a light is being shed on the topic and efforts are being made in order to provide clarity on the legal framework awarded to crypto assets, recognising their importance and established place within the financial world.

7. Conclusion

The objective of this study was to show how the European Union and the United States approach the topic of regulation of crypto assets and to conclude whether or not the two regions converge or diverge in the solutions adopted. With this view in mind, different legal matters were analysed deeper.

First an introduction of what crypto assets are and the story of their origin was presented, together with a summary of the major legal issues associated with their use and proliferation, as to allow an understanding of what the different jurisdictions needed to tackle and account for. This chapter also provided different points of view regarding the adoption of crypto currencies by different countries, with a special focus on El Salvador and Venezuela. The goal of this chapter was to show how the issues attached to the use of digital assets are not solely contained within the borders of each jurisdiction, but are instead global and widespread. To properly tackle the challenges tied to virtual currencies, an international approach would serve the different interest better and only that could properly guarantee an uniform solution. Nonetheless, several countries have dived into the issue and have chosen a positioning which puts them either on a more crypto-friendly area, or the total opposite. As seen, several countries have chosen to fully ban the use of crypto, while others have welcomed this asset type into their financial system or even create their own national crypto coin.

Having settled that all around the World, countries face similar issues when it comes to the need to regulate crypto currencies, chapter 3 dived into the issue of how to classify this type of asset. In this matter, both the European Union and the Unites States explored similar solutions. One major coinciding point was that both jurisdictions looked into not only the general classification of crypto currencies, but paid special attention to the issue of ICOs. Similarly as well, both regions have determined that current legislation is unfit to properly account for crypto assets and that these could fall into the scope of two broad classifications. In the European Union, the relevant authorities have either said that crypto assets have similar characteristics as financial instruments, and should therefore be classified as such, while other bodies disagree and defend that these assets should be treated as electronic money. On the other side of the Atlantic, the discussion focused on the possible classification of digital coins as securities or commodities. In any case, the discussions were not totally insightful and it was determined, in both regions, that only a case by case analysis will do for now, until a more clear and comprehensive framework is adopted.

On chapter 4, taxation issues tied with the use of crypto currencies were explored and it was possible to conclude that both regions showed serious efforts in the matter of finding a clear solution on how these assets should be taxed. In the European Union, Member States retain autonomy for fiscal matters, and as such it is possible to identify different approaches within the Union. There are some countries which have adopted clear crypto-friendly frameworks, such as Germany, Malta and Portugal, which do not tax crypto gains. On the other hand, Austria introduced a ground breaking regime where crypto assets are taxed in the same way as stocks. Despite that, defining a clear solution within each country improves certainty and is a way of states recognising the existence of these assets in the financial system. Nonetheless, the CJEU has issued an important decision where it is determined that digital coins are exempt from the VAT, which is an Union-wide tax, thus making it binding for all Member States. Still in the European Union, the awaited MiCA Regulation is expected to solve issues of double taxation when it comes into force, for situations where taxpayers are so in different countries. In the United States, quite differently, crypto assets are taxed as property throughout the entire country. Furthermore, the IRS determined that gains deriving out of crypto assets shall be taxed with the normal income tax, if the coins are held for a period longer than one year. The American solution might prove less burdensome, in the sense that there is one singular solution, unlike the European approach where there is a patchwork scenario.

The following comparison point under analysis was the way in which both regions tackled AML and CTF concerns. In this particular sector the two regions registered a very similar evolution, adopting identical measures. As is usually the case with crypto assets, the legal issues require an international approach. This is especially true for the efforts to prevent money-laundering and terrorism financing activities, fostered by the anonymity tied to the use of crypto currencies. As such, in the year 2018, through the guidance provided by the FATF, both the European Union and the United States started to focus on establishing a solid framework to enforce AML and CTF rules. The main efforts focused on extending the applicability of already existing legislation to crypto assets, or creating new laws targeting solely virtual currencies. Moreover, both regions determined the importance of establishing authorities responsible for the supervision of the correct implementation of such rules. It was understood by both regions that the anonymity issue needed to be particularly addressed, thus imposing strong record keeping obligations and disclosing rules for certain entities, to ensure some base-level of transparency that guarantees traceability of transactions. In the European Union, the main legal framework is provided by AML Directives, which require implementation by the Member States, thus ensuring a uniform approach within the Union. Moreover the AML authority, expected to start its activity in 2024, shall supervise the correct adoption by the different jurisdictions. Not so differently, in the U.S. the AML Act of 2020 is the core legal document at federal level, as to guarantee that throughout the States AML and CTF efforts are convergent.

Lastly, this study dives into the expected outlook for the regulatory framework of crypto assets in the European Union and the United States. The biggest similarity lies on the fact that the future of these assets is still to be traced and determined, pushed by different factors which will influence it. In the European Union, however, the outcome can be predicted more easily, as it is known that the MiCA Regulation shall come into force in the coming years and that this instrument will provide a quite extensive legal framework, covering the different aspects which relate to crypto assets and bringing the so-awaited certainty around the topic. Quite differently, in the U.S. the future of digital currencies at a federal level will be deeply influenced by two important court decisions which will set the precedent as to how crypto assets will be classified and whether or not they will fall under the scope of the Securities Act. Moreover, the current President, Joe Biden, has issued an Executive Order on the topic of the responsible development of crypto assets. However, this instrument only calls upon the relevant government agencies demanding they provide answers regarding some of the most important issues surrounding crypto assets. As such, no comprehensive legislation is expected in the United States, leaving most of the issues addressed in this study to be tackled either by case law or by statal measures.

This comparative study concludes that the two regions have been developing similarly and tackling the same issues simultaneously, in a more or less identical manner. There is a clear realisation that these assets have entered the international financial system and therefore call for international co-operation. The EU and the U.S. have been taking into consideration the major recommendations provided by international agencies and bodies, while trying to navigate the autonomy awarded to Member States and States, respectively. The divergencies are mainly tied to the legal system adopted in each region. While in the European Union, regulations from the European Commission can legislate and thus guarantee an uniform approach within the EU, in the U.S. case law weighs more and determines how assets will be treated. Despite the several issues still undefined, both the EU and the U.S. prioritised establishing clear rules on the matter of taxation of crypto assets, as well as in the implementation of AML and CTF rules.

Contributions to this study are welcomed, especially in light of the expected developments already mentioned. The outcome of the implementation of the MiCA Regulation, as well as the developments pushed by the Executive Order of President Joe Biden and the two cases now running in American courts will surely bring a different perspective to many of the topics analysed in this Master Thesis. Moreover, the recent abrupt fall of the value of several crypto coins leaves room for speculation as to whether or not the European Union and the United States continue to welcome this type of asset in their financial systems in the same manner.

Annex

Image 1

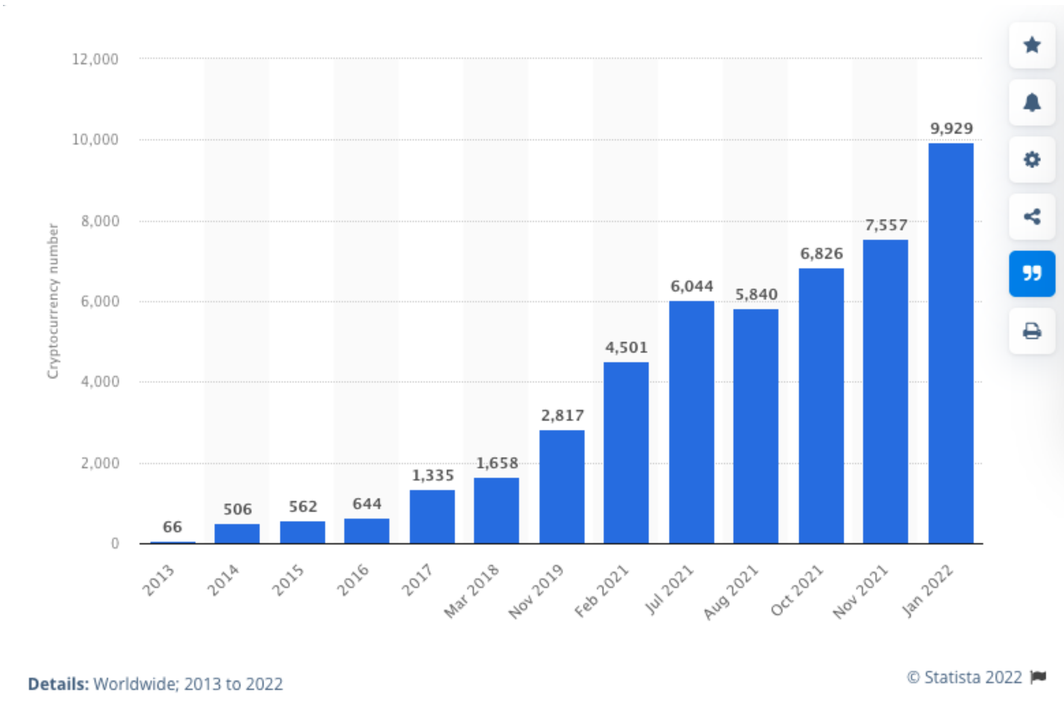
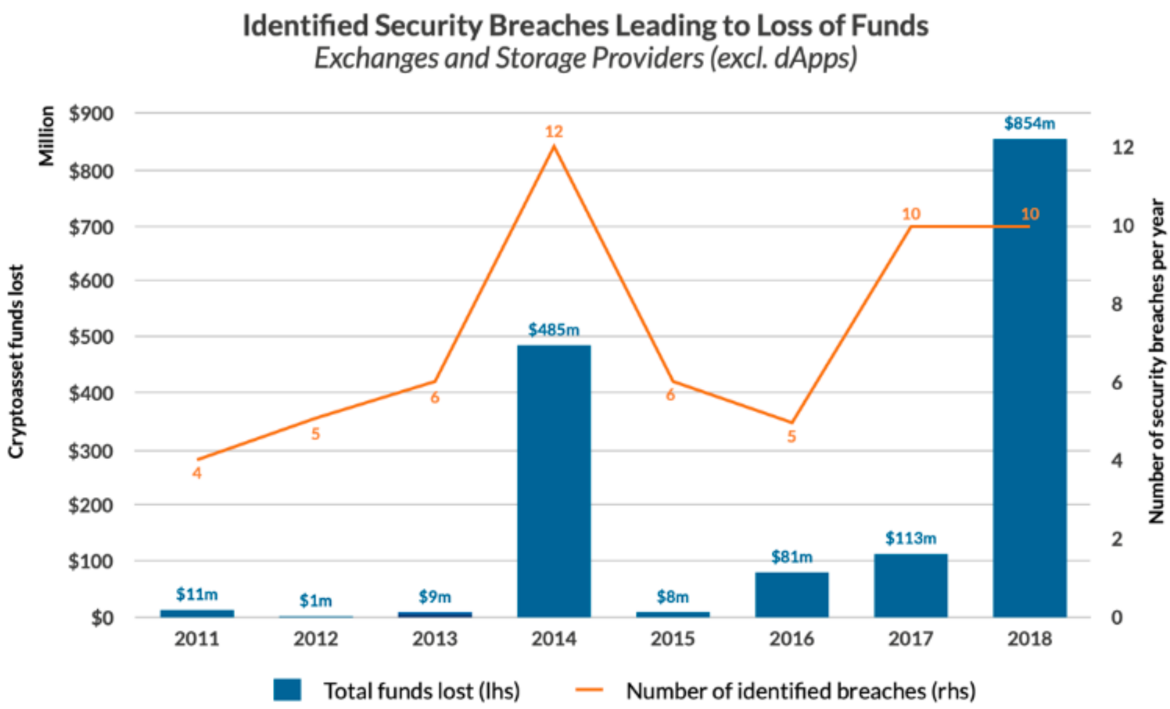


Image 2



Source: European Parliament, Directorate-General for Internal Policies of the Union, Houben, R., Snyers, A., *Crypto-assets: key developments, regulatory concerns and responses* (European Parliament, 2020).

Image 3

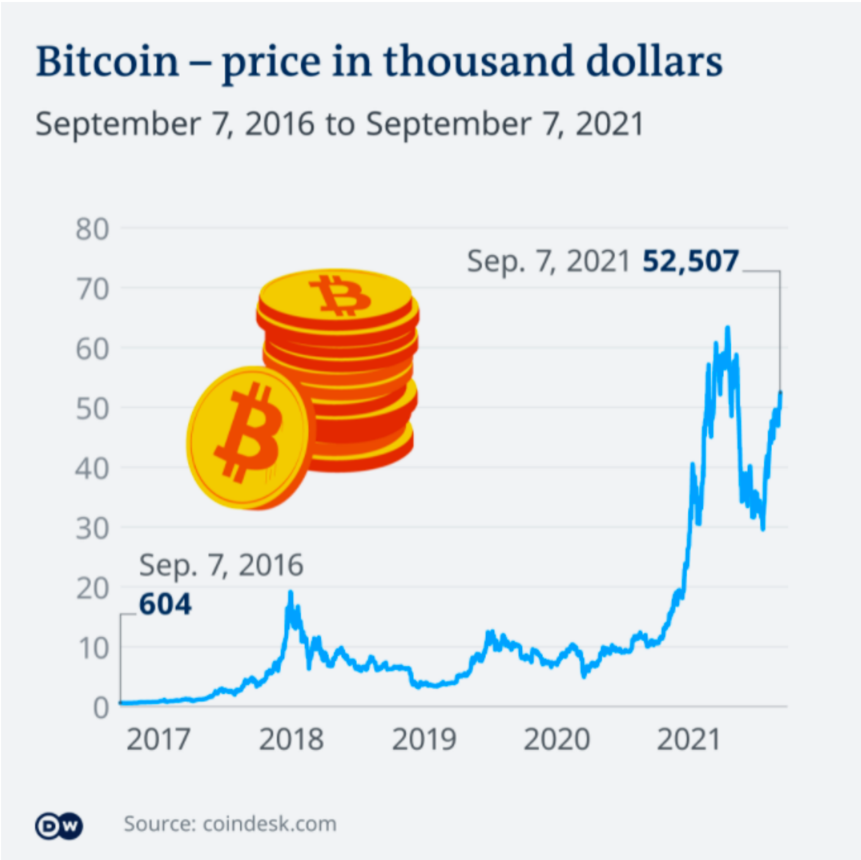
Number of Bitcoins in circulation worldwide from October 2009 to January 9, 2022

(in millions)

Characteristic	Number of Bitcoins in millions
Jan 09, 2022	18.92
Jan 08, 2022	18.92
Jan 07, 2022	18.92
Jan 06, 2022	18.92
Jan 05, 2022	18.92
Jan 04, 2022	18.92
Jan 03, 2022	18.92
Jan 02, 2022	18.92
Jan 01, 2022	18.92
Dec 2021	18.92
Nov 2021	18.89
Oct 2021	18.86
Sep 2021	18.83

Source: <www.statista.com/statistics/247280/number-of-bitcoins-in-circulation/>

Image 4



Source: '*El Salvador: Bitcoin adoption met with flash crash, suspicion*' DW, (08 September 2021), <www.dw.com/en/el-salvador-bitcoin-adoption-met-with-flash-crash-suspicion/a-59112622>.

Image 5

Diagrammatic representation of the ambit of EU financial services law referred to in the report with regard to crypto-assets[37]

Source: European Banking Authority, *Report with advice for the European Commission on crypto-assets* (2019) .

Image 6

Box 1: Basic taxonomy of crypto-assets

At present there is no common taxonomy of crypto-assets in use by international standard-setting bodies. However, generally speaking, a basic taxonomy of crypto-assets comprises three main categories of crypto-asset:

Payment/exchange/currency tokens	Investment tokens	Utility tokens
Often referred to as VCs or crypto-currencies. Typically do not provide rights (as is the case for investment or utility tokens) but are used as a means of exchange (e.g. to enable the buying or selling of a good provided by someone other than the issuer of the token) or for investment purposes or for the storage of value. Examples include Bitcoin and Litecoin. 'Stablecoins' are a relatively new form of payment/exchange token that is typically asset-backed (by physical collateral or crypto-assets) or is in the form of an algorithmic stablecoin (with algorithms being used as a way to stabilise volatility in the value of the token).	Typically provide rights (e.g. in the form of ownership rights and/or entitlements similar to dividends). For example, in the context of capital raising, asset tokens may be issued in the context of an ICO which allows businesses to raise capital for their projects by issuing digital tokens in exchange for fiat money or other crypto-assets. Examples include Bankera.	Typically enable access to a specific product or service often provided using a DLT platform but are not accepted as a means of payment for other products or services. For example, in the context of cloud services, a token may be issued to facilitate access.

However, there is a wide variety of crypto-assets some of which have features spanning more than one of the categories identified above. For example, Ether has the features of an asset token but is also accepted by some persons as a means of exchange for goods external to the Ethereum blockchain, and as a utility in granting holders access to the computation power of the Ethereum Virtual Machine.

Source: European Banking Authority, *Report with advice for the European Commission on crypto-assets* (2019

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