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Digital taxation prospectives. Cryptocurrencies taxation with regard of Germany and Austria. The possible way towards an international global minimum taxation

di Filippo Luigi Giambrone

(Ricercatore di tipo A di diritto tributario, facoltá di giurisprudenza, presso l´Universitá degli Studi del Sannio)

Sommario

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Abstract

This study provides an in-depth analysis of the evolving landscape of digital and cryptocurrency economies within the European Union (EU), focusing on regulatory frameworks, taxation policies, and broader economic implications. With the introduction of the Directive on Administrative Cooperation (DAC8), the EU addresses the emergent tax challenges posed by cryptocurrencies. DAC8 seeks to enhance transparency in cryptocurrency earnings through expanded reporting and information exchange mandates for crypto service providers, aligning with the Markets in Crypto-assets Regulation (MiCA) and international standards. This move is aimed at combating tax evasion and fostering fair competition, particularly benefiting Small and Medium-sized Enterprises (SMEs).The paper also explores the implications of rapid technological advancements on taxation structures, emphasizing the need for comprehensive tax reform in light of digitalization and ecological sustainability. The discussion includes Italy's strategic responses to these challenges through its National Recovery and Resilience Plan.Further, the document examines the complex legal landscape surrounding cryptocurrencies like Bitcoin and Ethereum, delving into their classification, potential challenges to state currencies, and diverse tax treatments across EU and German laws. Additionally, the study investigates the Value Added Tax (VAT) aspects of cryptocurrencies in Austria, particularly in light of the European Court of Justice's Hedqvist ruling, which has significant implications for Bitcoin exchanges and mining activities.Conclusively, the paper underscores the EU's proactive stance in shaping a regulatory environment conducive to cryptocurrency innovation while safeguarding consumer interests and addressing environmental concerns. It highlights the importance of adapting to the digital transformation and the potential risks inherent in unregulated cryptocurrency markets. The study offers a comprehensive perspective on the current state and future trajectory of digital taxation and cryptocurrency regulation in the EU, emphasizing its impact on the economy and legal system.

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1. Introduction into the subject matter.

The EU is updating the Directive on Administrative Cooperation (DAC) to tackle the taxation challenges posed by cryptocurrencies. The updated DAC, known as DAC 8[1], expands reporting and information exchange requirements among EU tax authorities to monitor cryptocurrency earnings. This is in response to the lack of information available to tax authorities regarding cross-border cryptocurrency transactions. While the Markets in Crypto-assets Regulation (MiCA) focuses on regulating the cryptocurrency market, it does not address tax reporting. DAC 8 aligns with MiCA's definitions and requirements to avoid additional administrative burdens for crypto service providers. It also aligns with international standards endorsed by the OECD and G20 to enhance tax transparency for cryptocurrencies. DAC 8 introduces provisions for reporting and information exchange to improve regulations and close tax evasion loopholes associated with cryptocurrencies.

The proposal requires all providers of crypto services, regardless of size or location, to report transactions of EU-based customers, including both domestic and cross-border transactions. In some cases, reporting obligations also apply to Non-fungible Tokens (NFTs). Financial institutions are also mandated to report transactions involving e-money and digital central bank currencies. Overall, DAC 8 strengthens member states' capabilities to detect and combat tax evasion and avoidance in the cryptocurrency space, promoting tax transparency and revenue generation for public investments and services. The expansion of automatic information exchange to include cross-border advance tax rulings for wealthy individuals is a significant development. This applies to individuals with a minimum wealth of EUR 1,000,000, excluding their primary residence. Member states will share information on these rulings issued, modified, or extended between 2020 and 2025. There is also a proposal to establish a standardized minimum penalty for serious non-compliance. Regarding the impact on small and medium-sized enterprises (SMEs), DAC 8 is not expected to impose a significant burden. Most of the required information is already used by cryptocurrency service providers in their daily operations. Having a consistent EU-wide regulatory framework will be easier for SMEs compared to varying reporting requirements across member states. This initiative aims to ensure fair competition, benefiting SMEs.[2] Concerns have been raised about EU-based cryptocurrency service providers moving to other countries to avoid EU reporting obligations. However, DAC 8 applies to all companies serving EU residents, regardless of their location. Moving to third countries would not provide any

[1] DELOITTE, MiCA and DAC8 – Council of the EU adopts regulatory framework and reporting requirements for crypto-assets, 2023, p. 1

[2] Cfr. EUROPEAN COMMISSION, A Fair and Efficient Tax System in the European Union for the Digital SingleMarket, 2017. EUROPÄISCHE KOMMISSION, Warum brauchen wir eine weitere Aktualisierung der Richtlinie über die Zusammenarbeit der Verwaltungsbehörden (DAC)?, 2022, p. 1 ss.

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advantages. MiCA establishes a clear framework for the EU crypto asset market, requiring authorization and establishment within the EU for providers serving EU users. DAC 8 and MiCA have distinct purposes but are both relevant to the regulation of crypto services. DAC 8 applies to crypto service providers under MiCA as well as those not covered by it, providing provisions for reporting information. The inclusion of advanced tax rulings for wealthy individuals in DAC 8 aims to improve tax transparency and fairness among EU member states. While not all countries issue such rulings, they have significant tax implications, especially for corporate taxation. Failing to report and exchange this information can lead to exploitable loopholes for tax evasion. Regarding minimum penalties, the DAC aims for uniformity across the EU, as enforcement measures currently vary among member states. Establishing a minimum threshold through the Directive on Administrative Cooperation[3] ensures consistent enforcement while allowing member states to adapt within their legal frameworks.[4] Europe is confronted with both potential and challenges when it comes to cryptocurrencies.[5] The decentralized nature of these digital currencies makes it challenging to establish a uniform and consistent documentation system[6], with the blockchain often fragmented when assets are held in different locations. This decentralized and diverse crypto landscape presents significant hurdles for tax authorities, traders, and users alike. One of the key differentiating factors of cryptocurrencies like Bitcoin and Ethereum is their high volatility, with prices experiencing substantial fluctuations within short periods. This volatility poses significant financial risks for investors and businesses that accept cryptocurrencies as payment. The European Central Bank attributes these fluctuations to speculative trading activities and market psychology. Investors need to be aware of the potential losses resulting from such volatility, while businesses may face liquidity challenges when converting digital assets into fiat currencies efficiently. When it comes to e-commerce, using cryptocurrencies introduces considerable risks for consumers. Unlike traditional payment methods, there are no protective measures available, such as chargebacks, refunds, or dispute resolution procedures. Additionally, the pseudonymous nature of cryptocurrency transactions

[3] For an overview regarding the principles oft he italian administrative action cfr. P. FORTE, Principles of administrative action after the recent reforms in M.P. Chiti, (cur.) General principles of administrative action, Bononia University Press, Bologna, 2006.

[4] O. FEHRENBACHER, Steuerrecht, Bade-Baden 2019; K.VOGEL, M. LEHNER, Doppelbesteuerungsabkommen, München, 2021; K. TIPKE, M.LANG, Steuerrecht, 24. Aufl., Köln, 2021; EUROPÄISCHE KOMMISSION, cit., p. 2 ss.

[5] For an in depth overview of the digital taxation cfr. EY, Digital services tax: Jurisdiction activity summary, 2020; G. KOFLER - J. SINNIG, Equalization Taxes and the EU's 'Digital Services Tax', 47 Intertax 176, 2019, pp. 176–200.

[6] OECD, Addressing the Tax Challenges of the Digital Economy, Action 1–2015 Final Report, OECD/G20 Base Erosion and Profit Shifting Project (2015). ; E- CLEAR, DAC-8 und ihre Auswirkungen auf Kryptowährungen, 2023.

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makes it more challenging to track and reclaim funds in cases of fraud or disputes. The environmental impact of cryptocurrencies is another crucial aspect to consider.[7] The energy-intensive mining of cryptocurrencies, particularly those utilizing the Proof-of-Work mechanism like Bitcoin, contributes to significant energy consumption and negative environmental consequences, including substantial CO_2 emissions. However, alternative consensus mechanisms like Proof-of-Stake have been developed to reduce energy consumption. Environmental sustainability remains a central concern in the cryptocurrency sphere. In conclusion, while cryptocurrencies offer potential benefits as alternative currencies and investment options, they also pose significant challenges and risks for European investors, businesses, and consumers. Addressing these issues necessitates further research, policy developments, and regulatory harmonization at both the European and global levels.[8]

2 Digital taxation future

The profound changes[9] in our civilization are driven by knowledge and innovation, especially through information and digital technologies. Unlike in the past, these changes are happening rapidly and discontinuously, far outpacing social structures and regulatory models. This mismatch, particularly in taxation, has allowed companies and multinational corporations in the new economy to accumulate significant wealth by exploiting the delayed adjustment of fiscal measures to technological advancements. Globalization, facilitated by new technologies, has worsened inequalities between regions and social classes, providing opportunities to shift wealth to low-tax countries through the digital and data-driven economy, resulting in additional tax advantages.[10]The strong relationship between the economy and technology is reshaping geopolitical balances and social structures, as well as impacting regulatory models and legal systems.[11] Recent events such as the

[7]E- CLEAR, DAC-8 cit., 2023.

[8] A. COMELLI, La "realtà economica e commerciale" quale "criterio fondamentale" per l'applicazione della disciplina dell'IVA, in Dir. prat. trib. int., 2022,pp. 99-117.

[9] For an overview regarding aspects of the digital heritage cfr. the P. FORTE, Il patrimonio culturale digitale: una enorme sfida per la comunità nazionale, in AA.VV., Impresa Cultura, XVI Rapporto Annuale Federculture, Gangemi, Roma, 2018.

[10] Cfr. KPMG, Taxation of the digitalized economy, 2021; A. F. URICCHIO, Fiscalitá e futuro digitale, in, F. GALLO - A. F. URICCHIO, La tassazione dell´economia digitale tra imposta sui servizi digitali, global minimum tax e nuovi modelli di prelievo, BARI 2022, p. 19 ss.

[11] OECD, Executive Summary of the Hearing on Blockchain and Competition Policy, Annex to the Summary Record of the 129th Meeting of the Competition Committee held on 6–8 June 2018, Dokument DAF/COMP/M(2018)1/ANN8/FINAL, https://one.oecd.org/document/DAF/COMP/M(2018)1/ANN8/FINAL/en/pdf, Nr. 3; P. PARDOLESI., Sostenibilitá cit., p. 399 ss; Cfr. A. F. URICCHIO, Fiscalitá e futuro digitale, in, F. GALLO , A. F. URICCHIO, La tassazione dell´economia digitale tra imposta sui servizi digitali, global minimum tax e nuovi modelli di prelievo, BARI 2022, p. 19 ss.

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coronavirus pandemic and political crises like the Ukraine-Russia war and rising energy prices have had severe effects on the economy, society, and employment, both domestically and globally.[12] A document from the Bank of Italy in May 2020 highlighted the significant impact of the COVID-19[13] pandemic on the Italian economy, with expectations of a sharp decline in economic activity, especially in the services sector, followed by a recovery in the second half of the year.[14]However, the timing and severity of the recovery remain uncertain due to various factors.[15] The growth projections for Italy in 2020 and 2021 show a wide range of estimates, with varying degrees of decline and recovery. The country's GDP is expected to decrease by an average of 9% this year, followed by a projected expansion of 4.8% in 2021. The COVID-19 crisis[16] has had a significant negative impact on human lives, well-being, and the economy, leading to a rapid contraction in world trade. Different sectors have been affected unevenly, with some industries facing suspensions while others continue to operate or even experience increased profits. To facilitate recovery and support struggling businesses, extraordinary financial and tax measures have been implemented. However, the acceptance of such measures has been hindered by opposition from member states.[17] It is important to prioritize targeted public spending on investments funded through debt to stimulate productivity and future growth. The National Recovery and Resilience Plan in Italy aims to address distributional equity and increase tax revenues through new measures, aligning with the Next Generation EU document.[18] However, a comprehensive tax reform should not solely rely on the recovery plan but should consider broader factors and adapt to

[12] Cfr. M. GREGGI, Rise and decline of the Westphalian Principle in taxation: The web tax case, in EC TAX Review, 2020. The article examines the significant influence of the digital economy on international taxation and contends that traditional tax regulations are insufficient to address how multinational enterprises conduct business and create value online. The central argument of this analysis is that, while the authority of states to tax is inherently linked to territoriality (and thus to physical elements), the Internet economy operates in a virtual space—a Terra Incognita—that remains largely unexplored in legal terms; S. ROMANO, Lo Stato moderno e la sua crisi, Pisa, 1910; essi, tuttavia, assumono nuovi contorni per effetto della deterritorializzazione del diritto propria del mondo globale e della diffusione delle nuove tecnologie. Su tali tematiche, cfr. M. Basciu, Crisi e metamorfosi della sovranità, Milano, 1996: L. FERRAJOLI, La sovranità nel mondo moderno. Nascita e crisi dello Stato nazionale, Roma - Bari, 1997; S. CASSESE, La crisi dello Stato, Roma - Bari, 2002.

[13] For an overview regarding the Italian legal order cfr.G. BERETTA – G. BIZIOLI, Covid 19 and fiscal policies: Italian´s tax and fiscal policy measures at time of Covid-19 Crisis: Tax peanuts without a New Deal, in Intertax, 8/2020, pp. 761-764.

[14]Cfr. A. F. URICCHIO, Fiscalitá e futuro digitale, in, F. GALLO - A. F. URICCHIO, La tassazione dell´economia digitale tra imposta sui servizi digitali, global minimum tax e nuovi modelli di prelievo, BARI 2022, p. 20 ss.

[15]O. FEHRENBACHER, Steuerrecht cit., 2019; K.VOGEL, M. LEHNER, Doppelbesteuerungsabkommen cit.,7, 2021; K. TIPKE, M.LANG, Steuerrecht cit., 2021

[16] For an overview regarding the Italian legal order cfr.G. BERETTA – G. BIZIOLI, Covid 19 cit., pp. 761-764.

[17] D. Hohenwarter, G. Kofler, G. Mayr, J. Sinnig, Qualification of the Digital Services Tax Under Tax Treaties, 2019, 47 Intertax 140; P. PARDOLESI, Sostenibilitá cit. e, p. 399 ss; Cfr. F. GALLO, Il tributo cit., 2021, n. 2.

[18] Cfr. M. GREGGI, Rise and decline cit., 2020, Cfr. F. GALLO, Il tributo quale indispensabile strumento di politiche ri-distributive, in Rass. trib., 2021, n. 2.

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the economic transformations brought about by the digital revolution.[19]President Draghi emphasizes the necessity and urgency of a comprehensive tax system reform, which should revise income taxation, combat tax evasion, and address the web tax issue. Ecological sustainability is a top priority for future challenges, compounded by the energy crisis and geopolitical changes resulting from the Russo-Ukrainian conflict. The Next Generation EU and the Italian PNRR stress the critical role of the ecological transition as the foundation for a new global development model. Drastic reduction of climate-altering gas emissions, enhancing energy efficiency, and effective management of green areas through reforestation and integration into urban territories are key steps. The agricultural and forestry sectors play a strategic role in mitigating greenhouse gas emissions. Italy should aim to become a producer of eco-friendly goods and services aligned with the ecological transition[20], including environmentally compatible materials and transitioning the automotive sector to electric vehicles. To avoid potential retaliation from the US and address unintended consequences, it might have been preferable to delay the implementation of the web tax or its collection. However, due to the previous government's determination and impending deadlines, it is crucial to address issues such as cascading application of the tax and unequal treatment of digital platforms and small businesses. The burden of the 3% tax on digital transactions may be shifted onto small and medium-sized enterprises.[21]Shifting towards a circular economy[22], where materials are reintroduced into production cycles without entering the biosphere, is crucial. Fiscal measures play a fundamental role in ensuring fair resource redistribution and promoting eco-friendly behaviors through incentives. Environmental taxation[23] and tax incentives for eco-friendly technological innovation are important tools. Recent measures, such as the approval of the Carbon Border Adjustment Mechanism (CBAM)[24], indicate increased awareness among European institutions. The digital revolution and environmental transition can contribute to finding solutions for social challenges,

[19] Cfr. G. PETRILLO, Next Generation UE e nuovo sistema di risorse pro-prie: un passaggio decisivo verso la costituzione di un nuovo modello fiscale europeo?, in Riv. Dir. Trib. On line, 2021.

[20] D. Hohenwarter, G. Kofler, G. Mayr, J. Sinnig, Qualification of the Digital Services Tax Under Tax Treaties, 2019, 47 Intertax 140; A. F. URICCHIO, Le prospettive di riforma della fiscalità ambientale in ambito UE nell'ottica della transizione ecologica e della fiscalità circolare, in Rivista di diritto tributario internazionale, 1, 2022.

[21]EUROPEAN COMMISSION, The EU Budget Powering the Recovery Plan for Europe, COM(2020) 442,p. 15 .

[22] A. COMELLI, La "realtà economica e commerciale" cit.,pp. 99-117.

Cfr. A.F. URICCHIO - G. SELICATO, Green deal e prospettive di riforma della tassazione ambientale. Atti della II summer school in circular economy and environmental taxation, BARI 2022.

[23] M. GREGGI, Frodi fiscali e neutralitá del tributo nella disciplina dell´IVA, in Diritto e pratica tributaria, 2016; Cfr. A. F. URICCHIO – G. SELICATO, op.cit.., 2022.

[24] G. SELICATO, The EU proposal for a carbon border adjustment mechanism: an advanced tool to combat carbon leakage , a new own resource or moral suasion for third countries? In Review of European and comparative law, Vol. 5, 2022.

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and data availability facilitates a more sustainable and responsible development model.[25]The pervasiveness of the goals of the European Green Deal highlights the importance of considering the ecological footprint of information and communication technologies (ICT). The ICT sector has various potential impacts, including increased global electricity consumption (estimated between 5% and 9% of total consumption), higher emissions, and the use of scarce or even rare raw materials (raising concerns about the recovery and disposal of digital waste in line with the circular economy framework). The close connection between the EU's digital strategy and environmental issues is acknowledged in the document "Shaping Europe's Digital Future," which proposes measures for the green transition of the ICT sector. Similarly, the cited white paper emphasizes the need to consider the environmental impact of AI systems throughout their lifecycle and supply chain, including resource usage for algorithm training and data storage. The taxation of the new digital and data-driven economy has been a long-debated topic, and this article explores it from multiple perspectives, especially from the cryptocurrency's angle. It offers a comprehensive collection of reflections, characterized by depth and awareness of the need for a fundamental reorganization of the digital taxation system. The aim is not only to modernize an outdated tax system that focuses more on the past than the future but also to broaden the tax base and restore greater distributive fairness to the fiscal system.[26]

3 Cryptocurrency

Money has various functional properties, such as a means of payment, a store of value or a unit of account, and can take on different forms. In the form of a currency[27], money is traditionally something sovereign, issued by a central bank and controlled by it with the aim of maintaining purchasing power (price stability). Virtual currencies, such as Bitcoin, Ethereum, and Libra/Diem, challenge the

[25] EUROPEAN COMMISSION, Time to Establish a Modern, Fair and Efficient Taxation Standard for the Digital Economy, COM (2018) 146.

[26] O. FEHRENBACHER, Steuerrecht cit., 2019; K.VOGEL, M. LEHNER, Doppelbesteuerungsabkommen cit.,7, 2021; K. TIPKE, M.LANG, Steuerrecht cit., 2021; Cfr. A. F. URICCHIO, op.cit., p. 30 ss

[27] M. GREGGI, Frodi fiscali e neutralitá cit., 2016; For a better overview concerning the digital economy taxation cfr. F. GALLO – A. F. URICCHIO, op.ult.cit, 2023, p. 30 ss.; For an overview concerning the italian windfall taxation because of the facing of crisis cfr. A. F. URICCHIO – P. MANNO, Le emergenze energetiche tra crisi geopolitica e questione ambientale, 2023, p. 120 ff. According to A. F. URICCHIO, The experience of extraordinary taxes in our country appears limited and circumscribed. In particular, the extraordinary tax on war profits and and assets was introduced by Royal Decree no. 2164/1919 on a taxable base formed by the increases in assets and income due to the war between 1 August 1914 and 31 December 1919. Immediately afterwards the extraordinary wealth was extended to the total assets of natural persons (Royal Decree-Law no. 78 of 5 February 1922) with the main purpose of procuring greater public revenue; More precisely, the tax affected both natural persons and collective entities, with the exception of joint stock companies, whose taxable assets, assessed on the fixed date of 1 January 1920, reached the value of 50,000 lire.

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traditional concept of centrally controlled currencies. The lack of comprehensive regulation has created legal uncertainty for individuals and companies interested in using these forms of financing. The debate on regulating virtual currencies has gained momentum at different regulatory levels, given their socio-economic relevance. Specific forms of project and company financing, like Initial Coin Offerings (ICO) or Initial Token Offerings (ITO), involve exchanging tokens for other virtual currencies or money, with the promise of increasing their value. However, the lack of a clear term for cryptocurrencies adds to the nebulous nature of the legal debate.

Understanding the technical functioning of virtual currencies is crucial for analyzing their special characteristics. The question of whether cryptocurrencies pose a threat to traditional state currencies, as they exist beyond the control of central banks, can only be addressed by considering specific legal systems and their conceptual frameworks. European Union law, including the role of the European Central Bank, and relevant national monetary laws, such as in Germany, are important factors to consider. Given the global nature of the token economy, it is necessary to approach legal issues related to cryptocurrencies within the multidimensional framework of European and national monetary laws.[28] The central question is whether cryptocurrencies can possess the characteristics of a "good currency," including value stability, security, redemption confidence, and efficiency. The risks associated with virtual currencies could potentially impact the stability of the euro and the role of the ECB.[29]Various regulatory scenarios are conceivable, ranging from prudential

[28] OECD, Tax Challenges Arising from Digitalisation – Report on Pillar Two Blueprint, Inclusive Framework on BEPS, OECD/G20 Base Erosion and Profit Shifting Project (2020); S. OMLOHR- M. LINK, Kryptowährungen cit., p. 410 ff; for an overvie regarding the italian and european digital taxation Cfr. A. F. URICCHIO, L´ imposizione della data economy tra proposte di nuove forme di prelievo, wex tax italiana e global minimum tax , p. 111 ff, in, F. GALLO – A. F. URICCHIO, La tassazione dell´ economia digitale tra imposta sui servizi digitali, global minimum tax e nuovi modelli di prelievo, 2023. According to A. F. URICCHIO, the so called Pillar One also colled Unified Approach rectius unified approach on the tax treatment of the digital economy) , performs a "reallocative" function, being preordained to review the criteria for linking and allocating income, through a modification of the provisions on the transfer of intra-group profits, also in derogation of the arm's length principle, and the preparation of new "nexus rules, based on the concepts of "user participation", "significant digital and economic presence", "distribution-based approach" so as to grant the power of taxation to the jurisdictions in whose territory consumers and users of digitised business models are located. It is evident that through this model, also the subject of a public consultation, it is intended to overcome the criterion of permanent establishment, dating back to the beginning of the twentieth century, subjecting to taxation, within a given territory, the profits achieved by multinational com-panies with revenues exceeding a certain amount) operating in it, even in the absence of a physical presence. The implementation of this model requires international rules on how to distribute corporate profit tax rights among the largest and most profitable multinationals among several countries, also taking into account the ability of companies to operate without a physical presence; Omlor, ZRP 2018, 85, 86; Lerch, ZBB 2015, 190, 194.

[29] A. COMELLI, La "realtà economica e commerciale" cit.,pp. 99-117; O. FEHRENBACHER, Steuerrecht cit., 2019; K.VOGEL, M. LEHNER, Doppelbesteuerungsabkommen cit.,7, 2021; K. TIPKE, M.LANG, Steuerrecht cit., 2021; S. OMLOHR- M. LINK, Kryptowährungen und Token, p. 410 ss.

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regulations for cryptocurrencies to the recognition of certain models as legal tender. Monetary authorities may also consider issuing their own central bank digital currencies, such as a digital euro, as a response to the phenomenon of virtual currencies.[30]

3.1 Crypto, digital or virtual currency?

To bring clarity to the understanding of cryptocurrencies, it is important to address the conceptual diversity and varying attributions of terms like crypto, digital, and virtual "currencies." While "cryptocurrency" is commonly used and synonymous with digital currency in colloquial language, the term "virtual currency" is consistently used in official statements by monetary and financial supervisory authorities at national, European, and international levels.The German Federal Financial Supervisory Authority (BaFin) acknowledges the use of different terms such as virtual, digital, alternative, or crypto currencies/money/foreign exchange to describe new forms of payment. BaFin itself refers to the term virtual currency based on the opinion of the European Banking Authority (EBA). A virtual currency is defined as a digital representation of value that is not created by a central bank or public authority and does not necessarily need to be linked to legal tender. It can be used by individuals and legal entities as a medium of exchange, electronically transferred, held, or traded.

The European Central Bank (ECB)[31] provides a broader definition of "virtual currency" and makes a clear distinction between the broader concept of crypto-assets, which can be accepted by central banks, and "central bank money based on DLT or in digital form," referring to digital central money.

The Directive (EU) 2018/843[32], known as the 5th Money Laundering Directive, exclusively uses the term "virtual currency." However, the specific definitional approach used in the directive will be examined in more detail. In summary, within the monetary and supervisory context, the terms virtual/digital and "crypto" are used interchangeably, with "virtual currency" being the term commonly employed by

[30] Vgl. EUROPÄISCHE BANKENAUFSICHTSBEHÖRDE, Report with advice for the European Commission on crypto-assets, 9.1.2019, p. 9. All other elements of the offense, starting with the monetary value, are generally denied as well CH. STEINER, Krypto-Assets und das Aufsichtsrecht, p. 103 ff.

[31] EUROPEAN CENTRAL BANK, Report on a digital euro, October 2020, p. 24.

[32] S. OMLOHR- M. LINK, Kryptowährungen und Token, 2023, p. 412 ss; Directive (EU) 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 and terrorist financing, and amending Directives 2009/138/EC and 2013/36/EU, OJ No. L 156, p. 43; for an italian overview regarding digital taxation cfr. A.F. URICCHIO – S.A. PARENTE, Data driven e digital taxation: prime sperimentazioni e nuovi modelli di prelievo, in Diritto e pratica tributaria internazionale, n. 2/2021.

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various authorities and organizations.[33]

3.2 Emergence of cryptocurrency

3.2.1 DLT and blockchain as technological basis

Cryptocurrencies represent the digitalization and privatization of payment methods, utilizing blockchain and distributed ledger technology (DLT). DLT operates on a decentralized database where network participants have shared read and write access, eliminating the need for a central authority. The blockchain, the most common form of DLT, stores transaction data in encrypted blocks linked together by digital fingerprints called hashes. These blocks are stored in a centralized database, while the data chain itself is decentralized within a peer-to-peer network connected via the internet. This peer-to-peer network allows for direct and transparent transactions without intermediaries like banks, reducing costs and transaction times. Bitcoin, created in 2008 by Satoshi Nakamoto[34], is the oldest and most economically significant cryptocurrency, aiming to provide a secure and independent means of payment separate from state-controlled monetary policies. Cryptocurrencies offer a counter-design to traditional state currencies and claim to be free from inflationary risks, challenging the expertise of central banks in managing monetary policy.[35]

3.3 Taxation of cryptocurrencies according to the German Income Tax Act (EStG)

The taxation of crypto tokens, especially currency tokens, is a complex and uncertain area of law. The significant price fluctuations of currency tokens raise questions about their classification and tax treatment for income tax purposes. The increasing importance of tokens has caught the attention of tax authorities, given the potential income tax implications for investors. Germany, for example, has the potential to generate a substantial amount of income tax revenue from the booming daily trading volume of tokens. It is crucial to consider the losses incurred through price collapses

[33] P. PARDOLESI, Sostenibilitá e proprietá nell´ottica europe, in, A. BUONFRATE – A.F. URICCHIO (a cura di), Trattato breve di diritto dello sviluppo sostenibile, 2023, p. 399 ss,; S. OMLOHR- M. LINK, Kryptowährungen cit., p. 412 ss.

[34] R. MASON - L. PARADA, The Legality of Digital Taxes in Europe, 40 Virginia Tax Rev., 2020, p. 175 S. OMLOHR- M. LINK, Kryptowährungen und Token, p. 413 ss.; S. NAKAMOTO, Bitcoin: A Peer-to-Peer Electronic Cash System, https://bitcoin.org/bit coin.pdf (zuletzt abgerufen am 3.3.2021); for an intalian overview regarding digital taxation cfr. A. F. URICCHIO –S.A. PARENTE, Data driven e digital taxation: prime sperimentazioni e nuovi modelli di prelievo, in Diritto e pratica tributaria internazionale, n. 2/2021.

[35] O. FEHRENBACHER, Steuerrecht cit., 2019; K.VOGEL, M. LEHNER, Doppelbesteuerungsabkommen cit.,7, 2021; K. TIPKE, M.LANG, Steuerrecht cit., 2021; J. SCHOLZ, Kryptowährungen – Zahlungsmittel, Spekulationsobjekt oder Nullum?, http:// telc.jura.uni-halle.de/sites/default/files/BeitraegeTWR/Heft%20162_1.pdf (zuletzt abgerufen am 3.3.2021), p. 6.

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when determining the tax treatment.[36] However, the ever-growing variety of tokens and their different functionalities necessitate a case-specific tax analysis. Grouping tokens and applying specific tax treatments based on their characteristics can be practical. The question of whether income from tokens is subject to German taxation depends on the residence, habitual abode, registered office, or place of management in Germany. German tax liability applies to the entire global income of individuals falling under these criteria, regardless of the source or location of token acquisition or the company issuing the tokens. Double taxation agreements aim to prevent multiple taxation in both the residence country and the source country of income. These agreements typically follow the OECD model and allocate the right of taxation to the state of residence or domicile for various types of token-related income, such as business profits, dividends, interest, or gains from asset disposal.[37] For individuals residing in Germany, the German right of taxation generally applies without restrictions. Any foreign taxes already paid can be credited against German taxes. The taxation of income from tokens in Germany is discussed, focusing on individuals with unlimited tax liability. Tokens are considered independent assets for tax purposes, and their valuation is relevant for tax accounting. Tax law follows an economic approach, meaning that the economic meaning of legal norms is considered rather than strictly adhering to civil or supervisory law classifications. Currency tokens have been classified by the tax authorities as a mere unit of account, not e-money, legal tender, foreign exchange, or physical currency.[38] In terms of income taxation, currency tokens fall under the category of "other assets" as specified in Section 23 (1) no. 2 of the German Income Tax Act. These assets can be independently valued and have longer-term use. This category includes not only property and rights but also tangible conditions and concrete possibilities that involve costs for the taxpayer.[39] Foreign currency assets are considered "other assets" under § 23 (1) no. 2 of the German Income Tax Act (EstG), and a similar classification may be applicable to currency tokens. Utility tokens, similar to currency tokens, can be treated as "other assets" and generate income from private sales transactions. Investment tokens are likely classified as capital assets under § 20 of the German

[36] PH. MAUME- L. MAUTE, Rechtshandbuch Kryptowerte, Blockchain, Tokenisierung, Initial Coin Offerings, 2022, p. 484 ss; A current overview of the agreements concluded by Germany is available at https:////www.bundesfinanzministerium.de/Content/DE/Standardartikel/Themen/Steuern/Internationales_Steuerrecht/Staatenbezogene_Informationen/doppelbesteuerungsabkommen.html (zuletzt aufgerufen 28. 3. 2020).

[37] S. OMLOHR- M. LINK, Kryptowährungen und Token, p. 413 ss.; S. NAKAMOTO, Bitcoin: A Peer-to-Peer Electronic Cash System, https://bitcoin.org/bit coin.pdf (zuletzt abgerufen am 3.3.2021), S. 4 („completely inflation free").

[38] Antwort der Bundesregierung auf eine Anfrage des Abgeordneten Frank Schäffler (FDP), BT-Drs. 17/14530, 40; PH. MAUME- L. MAUTE, Rechtshandbuch cit. p. 486 ss.

[39] P. PARDOLESI, Sostenibilitá cit., 2023, p. 399 ss.; PH. MAUME- L. MAUTE, Rechtshandbuch Kryptowerte cit., p. 486 ss..; cfr. FG KÖLN EFG 10, 1216, rkr. zu Internet Domains.

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Income Tax Act. Depending on their characteristics, they can be categorized as shares in profits (§ 20 para. 1 no. 1), participation in a dormant partnership or participating loan (§ 20 para. 1 no. 4), or other types of capital claims (§ 20 para. 1 no. 7). The classification of equity and security tokens is not universally defined due to their diverse forms. § 20 para. 1 no. 1 of the Income Tax Act covers payments from participation relationships, including shares, profit participation rights, and limited liability company shares. Distributions from corporations and associations granting membership rights equivalent to capital participation are also covered.[40] If an investment token is structured as an equity token and provides distributions from a corporation or association, it is generally considered a share in profits under Section 20 (1) no. 1 of the German Income Tax Act (EStG). Income from investment tokens can also be included under Section 20 (1) no. 4 of the Income Tax Act if it originates from participation in a commercial enterprise as a silent partner or partnership loans. In such cases, the participation involves receiving interest on the provided capital based on the enterprise's profits. The silent partner or partnership lender should not be considered a co-entrepreneur and must not assume entrepreneurial risk or initiative. While participation in losses is common in a silent partnership, it is not necessary. Additionally, Section 20 (1) no. 7 of the Income Tax Act serves as a catch-all provision, covering capital gains not listed in Sections 20 (1) (1-6). For this provision to apply, the investment income must be derived from a capital claim representing a monetary claim, excluding claims in kind. This provision typically encompasses interest earned from capital loans. Debt tokens with fixed interest rates and no participation in losses are generally classified as other types of capital claims under Section 20 (1) No. 7 of the Income Tax Act.

3.4 Current taxation of income from tokens

3.4.1 Lending of tokens according to the German Income Tax Act (EStG)

As a rule, the transfer of tokens against payment (so-called lending, §6 marginal no. 152) is a self-employed and sustainable activity, so that it can be assumed to be

[40] A. COMELLI, La "realtà economica e commerciale" cit.,pp. 99-117; Vgl. E. RATSCHOW, § 20, in W. BLÜMLICH – Einkommensteuergesetz, Körperschaftssteuergesetz, Gewerbesteuergesetz: :Kommentar, in B.HEUERMANN – P. BRANDIS(edited by), Loose-leaf collection, 141st, update, Munich 2018, § 20 Rn. 61; for an overview on how the German federal court transposes the EU court of justices judgements compare F. L. GIAMBRONE, Transposition of the judgements of the European Court of Justice in Germany. Case note regarding the abnormal use of checks in the judgement of 5 may 2020 of the German Federal Constitutional court from a fiscal point of view, 2021; for an intalian overview regarding digital taxation cfr. A.F.URICCHIO – S.A.PARENTE, Data driven e digital taxation: prime sperimentazioni e nuovi modelli di prelievo, in Diritto e pratica tributaria internazionale, n. 2/2021; C.A. GIUSTI – F. L. GIAMBRONE, The Nomophylactic Function of the European Court of Justice in Tax Matters within the Italian and German Experience. Possible Dispute Settlement Solutions for the Member States, in comparative law review, 2019, p. 57 ss.

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commercial. Commercial lending is considered a self-employed and sustainable activity, making it subject to taxation. Private lending, however, is not clearly defined in terms of income classification. There is uncertainty whether the income from token lending should be classified as income from capital assets. One possibility is to apply section 20 paragraph 1 number 7 of the Income Tax Act, which deals with the tax liability of investment income in private assets. However, this provision usually fails to apply because token lending does not fall under the category of income from capital claims directed towards monetary payment. Token lending involves claims directed towards tokens rather than money. Another alternative, section 23 paragraph 1 number 2 of the Income Tax Act, is relevant for the sale of tokens but does not apply to lending since it is not considered a sale. The consideration received for the lending is also not subject to taxation under section 23 of the Income Tax Act. However, section 22 paragraph 3 of the Income Tax Act is relevant for private mining of tokens and paid services in the private sector, such as the transfer of use. The form of remuneration, whether conventional currencies or in kind, is irrelevant for taxability. Tax liability under section 22 paragraph 3 of the Income Tax Act only arises if the exemption limit of EUR 265 per calendar year is exceeded.[41]

3.4.2 Income from Investment Tokens

In the case of investment tokens, depending on the structure of the tokens, current income can be generated in addition to gains from the sale. The exact income tax treatment depends on the characteristics of the investment token. If the token holder acquires real membership rights, the tokens are classified as equity tokens. Equity tokens can be, among other things, classic profit shares, income from a typical silent partnership, from a partial loan or simply from the provision of capital. As a rule, current income is subject to income from capital assets pursuant to Section 20(1) no. 1 or no. 4 or no. 7 EStG.[42] The issuer of the tokens is subject to the obligation to pay capital gains tax under § 43 para. 1 sentence 1 no. 1 EStG or § 43 para. 1 sentence 1 no. 3 EStG, § 43 a para. 1 sentence 1 no. 1 EStG, § 44 para. 1 sentence 1 EStG. If, on the other hand, the equity token is classified for tax purposes as an atypical silent partnership, or even as a share in a Civil law partnership (GbR) or General partnership (OHG), the token holder generates commercial income according to § 15

[41] P. PARDOLESI, Sostenibilitá cit. p. 399 ss,; Maume- Maute, Rechtshandbuch Kryptowerte, Blockchain, Tokenisierung, Initial Coin Offerings, 2022, p. 495 ss. ; H. WEBER-GRELLET ,§ 22, in, L. SCHMIDT, Einkommensteuergesetz, 2018, Rn. 142; Levedag in Schmidt EStG § 20 Rn. 115; C.A. GIUSTI – F. L. GIAMBRONE, The Nomophylactic Function cit., in comparative law review, 2019, p. 57 ff; A.F. URICCHIO, The Future of European Environmental Policy in Appreciation of German Federal Constitutional Jurisprudence, in The Italian Law Journal, 8, 2022, p. 332 ss.

[42] N. WIGHARDT- J. KREKELER, Die Besteuerung blockchainbasierter Vermögenswerte, in Zeitschrift der Steuerberater 2019, 16 (19).

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para. 1 no. 2 EStG.[43] In this case, the issuer has no obligation to pay capital gains tax, but the income must be taxed in accordance with § 179 para. 2. If the issuer merely grants the purchaser of the token claims under the law of obligations, the term investment token is used.[44]For investment tokens, taxation of income from other capital claims under section 20(1) no. 7 EStG comes into consideration. This also

[43] For an overview concerning the Corporate governance of companies with public participation: civil and comparative law profitables cfr. C.A. GIUSTI, La corporate governance della societá a partecipazione pubblica: proficili civilistici e di diritto comparato, 2018. According to C. A. GIUSTI, The phenomenon of investee companies, and more specifically that of their governance, has been one of the main topics on which the triad of traditional formants (legislative, jurisprudential and doctrinal) has been constantly engaged in order to provide adequate answers in terms of legal certainty given the definitional and systematic difficulties that have characterized these particular companies.

It is now an incontrovertible fact that of the blurring between public and private, and this is due precisely to the emergence of the corporate phenomenon in public hands, the subject of this volume, in which we intend to briefly examine the historical-normative evolution of the institution of public companies, their nature and the procedural and in terms of liability reflections that follow from this new public-private asset. The recent enactment of the Consolidated Text on Participated Companies then turns out to be a further suitable element to support the interest for a broad reflection on the subject thus selected. With a view to offering an initial, albeit brief, definition of the object of investigation, "public companies" constitute those entities,structured according to the civil law model, in which the participation of the public hand causes in the corporate governance a partial deviation from the rules of the private type. More correctly, in the opinion of some authors, the phrase should be used"companies with public participation," in order to distinguish mainly the latter from the other public company paradigm, i.e. "in-house companies": in general terms, the former recur when the public administration holds a position more or less comparable to that of any private shareholder, while the latter are characterized by being defined as a longa manus of the public administration, blurring the boundaries between private and public entity.There is no shortage of points for comparative reflection: to this end, the chapter is devoted to the discipline of the "golden share" (and other related institutions) provided for in various legal systems, such as the United Kingdom, France, Germany, Spain and Portugal, especially in light of the multiple decisions of the Court of Justice that have affected the regulation of the powers connected to the so-called "golden shares." Another delicate issue that seems to have recently reached a pivotal point concerns the "bankability" of the public entity in corporate form, where the recent Consolidated Act on participated companies seems to have put an end to jurisprudential oscillations.

It should be recalled, in fact, how the traditional orientation was in the sense of excluding the subjection of such companies to bankruptcy proceedings, moving in particular from the literal tenor of the provision in Article 1 of the Bankruptcy Law. The evolutionary path, both doctrinal and jurisprudential, has highlighted the critical aspects of the negationist thesis, eventually finding confirmation, precisely, in the new provisions introduced by the delegated legislature.

The formally private nature of the investee companies requires an analysis regarding the nature of the main corporate acts, starting from the incorporation of public companies, in accordance with the new prescriptions contained in the Consolidated Act, passing then to the acts of appointment and revocation of directors, and finally to those of personnel hiring, so as to also identify the respective areas of jurisdiction of any litigation. Finally, the author provides, a careful overview of the profiles of liability of corporate bodies within the companies under review. In this context, the jurisprudential contribution will be of primary importance, in order to also define the contours of the division of jurisdiction in cases of corporate damage and fiscal damage within public companies; C.A. GIUSTI – F. L. GIAMBRONE, The relationship between European law and German law regarding the protection of the right to be forgotten as a fundamental right: the right to oblivion in the judgement of the German Constitutional Court "Right to be forgotten I" from a comparative point of view, in rivista dei diritti dei media, 2/2022, p. 270 ss.

[44] PH. MAUME- L. MAUTE,, Rechtshandbuch Kryptowerte cit., p. 495 ss; H. WEBER-GRELLET ,§ 22 cit., Rn. 142.

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represents income from capital assets and is subject to final withholding tax.

4 Some remarks concerning Value added tax aspects of cryptocurrencies with regard of the Austrian legal order

4.1 VAT assessment of cryptocurrencies: Exchange of Bitcoins into another currency

In 2015, the ECJ ruled in the Hedqvist case on the VAT classification of the exchange or change of Bitcoins into a legal currency.

4.1.1 ECJ Hedqvist

In the Hedqvist case, the question was whether the exchange of Bitcoins (as a virtual currency) into a legal currency (Swedish krona) or vice versa - for which a remuneration is payable - is exempt from VAT. In answering this question, the ECJ stated that "the virtual, mutually tradable currency Bitcoin, which is exchanged for conventional currencies in the context of exchange transactions, cannot be classified as 'goods' within the meaning of Article 14 of the VAT Directive".This is because the purpose of these virtual currencies is exclusively to be used as a means of payment. The sale of Bitcoins therefore does not constitute a supply of goods. With regard to the question of tax liability, the ECJ held that the exchange of Bitcoins for a conventional currency was a transaction within the meaning of Article 135(1)(e) of the VAT Directive and thus exempt from tax. According to the EU legal basis in Art 135(1)(e) VAT Directive (in the German version), the following transactions are exempt from VAT: "Transactions, including brokering, relating to currency, banknotes and coins which are legal tender, with the exception of collectors' items... "This provision must be interpreted - despite the fundamental requirement of a narrow interpretation of tax exemption regulations - in light of the purpose and the systematics of the VAT Directive.[45] The purpose of Article 135 (1) of the VAT Directive is to eliminate, by means of the tax exemption, the difficulties associated with the determination of the taxable amount and the amount of deductible VAT in the case of transactions involving means of payment.[46]Therefore, contrary to the wording of the Directive in German, the VAT exemption also covers transactions that do not relate to conventional currencies (i.e. "legal tender") but to "contractual means of payment" - such as Bitcoins in the case at hand. According to the ECJ, the decisive factor for the scope of application of the tax exemption regulation is that this currency is accepted by the parties to the transaction as an "alternative means of

[45] S. KIRCHMAYR-SCHLIESSELBERGER – W. KLAS – M. MIERNICKI - S. RINDERLE-MA- A.WEILINGER, Kryptowährungen, Krypto-Assets, ICOs und Blockchain, Recht – Technik – Wirtschaft, 2019, p. 256 ss; C.A. GIUSTI – F. L. GIAMBRONE, The Nomophylactic cit., 2019, p. 57 ss.

[46] S. KIRCHMAYR-SCHLIESSELBERGER – W. KLAS – M. MIERNICKI - S. RINDERLE-MA- A.WEILINGER, Kryptowährungen cit., p. 256 ss.; EuGH 22.10.2015, C-264/14, Hedqvist, Rz 36.

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payment" to the legal means of payment and does not serve any purpose other than use as a means of payment.[47] With regard to the German wording of the Directive, this decision was surprising because the German wording reduces the scope of application of the tax exemption regulation to "legal means of payment".[48] However, the ECJ noted that in other language versions of the VAT Directive, such a concretisation and restriction to "legal" means of payment is not to be found.
Furthermore, in a teleological interpretation of the tax exemption regulation - in view of the purpose and the systematics of the Directive - no restriction of the tax exemption regulation to "legal means of payment" was required. For the ECJ it was undisputed in the decision that Bitcoins served no other purpose than the use as a means of payment and were accepted in this capacity by the economic operators.[49]Therefore, the exchange of Bitcoins into a conventional currency was to be subsumed under the VAT exemption regulation. The European Court of Justice (ECJ) ruling in Hedqvist (C-264/14) case[50] was a landmark decision that provided legal insight into the tax implications of cryptocurrency transactions[51] within the European Union jurisdiction. The crude distinction between traditional currencies and virtual currencies was reinterpreted in the light of the evolving realities of finance.This ruling established Bitcoin and similar cryptocurrencies as a 'means of payment' that are accepted by the economic operators of a transaction. The tax exemption was granted given the complexity involved in determining the taxable amount in transactions involving such means of payment.However, the ruling raised concerns as its interpretation of the VAT directive contradicted with the German version. The German version restricted the scope of tax exemption to legal means of payment (gesetzliche Zahlungsmittel). The ECJ, nevertheless, clarified that the

[47] EuGH 22.10.2015, cit.,Rz. 49; In this regard, the ECJ was bound by the findings of the referring court. In this regard, the ECJ was bound by the findings of the referring court; A. F. URICCHIO, The Future of European Environmental Policy cit., , p.330 ss.

[48] S. KIRCHMAYR-SCHLIESSELBERGER – W. KLAS – M. MIERNICKI - S. RINDERLE-MA- A.WEILINGER Kryptowährungen cit. p. 256 ss.; The Italian version, for example, refers to "banconote e monete con valore liberatorio" (i.e. banknotes and coins with debt-discharging effect), while the English version refers to "currency, bank notes and coins" without further restriction or specification; ECJ 22. 10.2015, C-264/14, Hedqvist, para 46; Opinion of the Advocate General, ECJ C-264/14, BeckRS 2015, 80964; also Pielke, UmsatzsteuerlicheBehandlung von Bitcoin nach dem Urteil des EuGH, MwStR 2016,150; for an analysis of the EU Court of justice jurisdiction cfr. C. Giusti and F. L. Giambrone, The Biffi judgement and the Suarez case. Judicial decisions of the European Court of Justice and possible reforms of the Italian Civil Code from an European point of view, 2020, p. 625 ff; for an intalian overview regarding digital taxation cfr. A. F. URICCHIO A. – S. A. PARENTE, Data driven cit., n. 2/2021.

[49] S. KIRCHMAYR-SCHLIESSELBERGER – W. KLAS – M. MIERNICKI - S. RINDERLE-MA- A.WEILINGER Kryptowährungen cit. p. 256 ss ; EuGH 22.10.2015, C-264/14, Hedqvist, Rz 52.

[50] COURT OF JUSTICE OF THE EUROPEAN UNION, PRESS RELEASE No 128/15. (October 2015). Bitcoin transactions are exempt from VAT. Retrieved from https://curia.europa.eu/jcms/upload/docs/application/pdf/2015-10/cp150128en.pdf

[51] TOKENBOX, Taxation and Regulation of Cryptocurrencies in the European Union, 2020, Retrieved from https://tokenbox.io/en/blog/Taxation-and-Regulation-of-Cryptocurrencies-in-the-European-Union/

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determination should not be restricted to 'legal' means alone (ECJ Press Release No 128/15).

The broader scope and interpretation of Article 135(1)(e) of the VAT Directive, as per ECJ's decision in Hedqvist, expands the possibilities of interpretation for future decisions involving cryptocurrencies in the EU jurisdiction. This ruling has laid a significant precedent for other cases involving virtual currencies across Europe. For instance, in the judgment of the Skatteverket v David Hedqvist case (PTLR 2016,16(11)[52], 805-807), the Court ruled in alignment with the ECJ Hedqvist case that transactions to exchange a traditional currency for the 'Bitcoin' virtual currency, and vice versa, constitute the supply of services for consideration, so they are exempt transactions under Article 135(1)(e) of the VAT Directive. The judgement in Hedqvist bears substantial implications for future legal considerations involving cryptocurrency. Ensuing judgments might need to uphold this recognition of digital currencies as contractual means of payment to maintain coherence in EU jurisprudence. However, member States might also propose amendments to the VAT Directive in light of the increase in cryptocurrency transactions and to circumvent potential tax revenue losses.

4.2 Influence of EU law on Austrian national taxation law

4.2.1 Bitcoins as recognised currency and thus consideration within the meaning of the UStG

In the Hedqvist case, the ECJ not only commented on the question of tax exemption for exchange transactions, but also recognised Bitcoins in general as a currency and thus as a means of payment. Bitcoins are therefore consideration within the meaning of § 1 para 1 no 1 UStG.

This affects the determination of the basis of assessment for VAT purposes. Legal transactions in which the consideration is paid in Bitcoins are to be treated for VAT purposes as services for which the consideration consists of legal means of payment. This means that the value of the consideration - bitcoins (or another cryptocurrency with a corresponding payment function) - is the consideration and thus decisive for the basis of assessment (§ 4 para 1 UStG) for VAT.[53]

[52] SKATTEVERKET v DAVID HEDQVIST, European Court Reports 2015 – p. I-00000. Retrieved from http://curia.europa.eu/juris/liste.jsf?num=C-264/14.

[53] S. KIRCHMAYR-SCHLIESSELBERGER – W. KLAS – M. MIERNICKI - S. RINDERLE-MA- A.WEILINGER, Kryptowährungen cit., 2019, p. 256 ss; BUNDESMINISTERIUM FÜR FINANZEN (BMF), Steuerliche Behandlung von Kryptowährungen (virtuelle Währungen), https://www.bmf.gv.at/steuern/kryptowaehrung_Besteuerung.html (Stand 25.7.2017); cfr. A. F. URICCHIO, The Future cit., p. 329 ss.

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4.2.2 Scope of application of § 6(1)(8)(b) UStG

The decision of the ECJ in the Hedqvist case has clarified under EU law that the exchange of Bitcoins - as a means of payment - into a legal currency and vice versa is exempt from VAT within the meaning of Art 135 (1) (e) VAT Directive. Following this decision, however, the question still arises as to whether this tax exemption for exchange transactions also applies in Member States in which the national tax exemption regulation explicitly refers only to "legal means of payment"; this is the legal situation in Austria, cf. § 6 para 1Z 8 lit b UStG. Although this restriction in national law corresponds to the German wording of the Directive in Art 135(1)(e) VAT Directive, it does not correspond to the interpretation of the ECJ in the Hedqvist case law, taking into account the other language versions of the exemption provision in the VAT Directive and the purpose and systematics of the Directive.

The question of whether § 6 (1) 8 lit b UStG, contrary to its wording (restriction to "legal means of payment"), is to be interpreted in conformity with EU law in accordance with the case law of the ECJ to the effect that alternative - i.e. contractual - means of payment (such as bitcoins) also fall under the tax exemption regulation, is answered differently in the literature.[54]In principle, Art 288 TFEU in conjunction with Art 4 (3) TEU requires that regulations in the VAT Act be interpreted in accordance with the law. However, the wording of a national regulation is the limit for the interpretation. The wording of the tax exemption regulation clearly refers only to "legal tender". Some[55] therefore reject a Union-compliant interpretation of the Austrian provision to the effect that the tax exemption also applies to bitcoins. However, the wording of the national tax exemption provision dates back to a time when there were no alternative means of payment to legal tender.[56]Therefore, it cannot be assumed that the national legislator expressly intended to exclude virtual currencies with a payment function from the scope of application of the tax exemption regulation. Rather, there is a regulatory gap for this type of means of payment - which has only existed since the digital age. A regulatory gap can be closed by interpretation. The wording of § 6 (1) 8 (b) UStG, which has been too narrow up to now, therefore does not prevent an interpretation in conformity with

[54] S. KIRCHMAYR-SCHLIESSELBERGER – W. KLAS – M. MIERNICKI - S. RINDERLE-MA- A.WEILINGER, *Kryptowährungen cit.*, p. 259 ss.; P. HAUNOLD - CH. STANGL-M. TUMPEL, *News aus der EU*, in *Steuer und Wirtschaft International* Nr.12, 2015, p. 614ss. ; M. MAYR, *Umsatzsteuer-Update: Aktuelles auf einen Blick*, in *Steuer und Wirtschaftskartei* , 2016, Nr. 3 pp. 157 - 158.

[55] S. KIRCHMAYR- SCHLIESSELBERGER – W. KLAS – M. MIERNICKI - S. RINDERLE-MA- A.WEILINGER, *op.cit.*, p. 259 ff; M. MAYR, op.cit., pp. 157 -158.

[56] P. PARDOLESI, *Sostenibilitá* cit. p. 399 ss; for an analysis of the EU Court of justice jurisdiction cfr. C. Giusti and F. L. Giambrone, *The Biffi judgement cit.*, 2020, p. 625 ss.; S. KIRCHMAYR-SCHLIESSELBERGER – W. KLAS – M. MIERNICKI - S. RINDERLE-MA- A.WEILINGER, *op.cit.*, p. 259 ff; The provision is identical in the original version of the Turnover Tax Act 1994, Federal Law Gazette No. 663/1994, and the Turnover Tax Introduction Act 1972, Federal Law Gazette No. 224/1972, also speaks of "legal means of payment"; A. F. URICCHIO, *The Future of European Environmental Policy in Appreciation of German Federal Constitutional Jurisprudence*, in *The Italian Law Journal*, 8, 2022, p. 328 ff.

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EU law in accordance with the ECJ case law in the Hedqvist case.[57] Rather, according to Article 288 TFEU in conjunction with Article 4 (3) TEU, there is an obligation to interpret national law in accordance with the case law of the ECJ. Even if the Austrian legislator has not yet adapted the wording of the national VAT exemption, the exchange of Bitcoins into conventional currencies (as well as vice versa) is exempt from VAT.Whether the tax exemption also applies when bitcoins are exchanged for another cryptocurrency instead of a conventional currency has not yet been decided by the ECJ. However, it is likely that the decisive factor here is whether it is an alternative means of payment comparable to a legal tender. The cryptocurrency must therefore have no other purpose than use as a means of payment. Under this condition, the tax exemption regulation in § 6 para 1 no. 8 lit b UStG applies.

4.3 No input tax deduction for input services pursuant to § 12 paragraph 3 UStG

Since the exchange of Bitcoins for another legal or contractual currency with a payment function is not genuinely tax-exempt, there is no input tax deduction for input services pursuant to § 12 para 3 UStG.[58]The same applies to input services in connection with the exchange of other cryptocurrencies with a payment function into legal or contractual means of payment.

4.3.1 Trading in Bitcoins for speculative purposes

When trading in bitcoins for speculative purposes, it should first be clarified from a VAT perspective whether the person acting with speculative intent is to be regarded as an entrepreneur (§ 2 UStG). The mere purchase or sale of Bitcoins is a purely asset-managing activity that is not subject to VAT. However, commercial trading in Bitcoins - similar to commercial trading in securities - can justify entrepreneurial status if the intention is to generate income. However, in this case - at least for the continuous commercial exchange of Bitcoins into conventional currencies and vice versa - the tax exemption regulation in Art 135 (1) (e) VAT Directive or § 6 (1) 8 (b) VAT Act applies, as the ECJ clarified in the Hedqvist case. Accordingly, the commercial exchange of Bitcoins into other virtual currencies with a payment function must also be treated for VAT purposes. Based on the mining of gold, the mining of Bitcoins means the earning of Bitcoin units by solving cryptographic tasks. A so called miner provides validation and encryption services for the cryptocurrency network, for which he receives - in addition to transaction fees[59] - newly generated

[57]D. HOHENWARTER, G. KOFLER, G. MAYR, J. SINNIG, *Qualification of the Digital Services Tax Under Tax Treaties*, 2019, 47 Intertax 140.

[58] T. EHRKE – RABEL, *Kryptowährungen und Umsatzsteuer*, in S. KIRCHMAYER- G. MAYR- K. HIRSCHLER – T. EHRKE – RABEL – G. KOFLER(a cura di), *Digitalisierung im Konzernsteuerrecht*, pp. 145 - 155.

[59] S. KIRCHMAYR-SCHLIESSELBERGER – W. KLAS – M. MIERNICKI - S. RINDERLE-MA- A.WEILINGER *Kryptowährungen cit.*, p. 262 ss; Die umsatzsteuerliche Behandlung von Transaktionsgebühren bleibt vorliegendweitgehend außer Betracht, vgl dazu bereits: D. AIGNER- P. BRÄUMANN – G. KOFLER- M.

units of Bitcoins.[60]

To participate in the peer-to-peer network for mining cryptocurrency, one needs to download client software from the internet.[61] Transactions are recorded in blocks and added to a blockchain, which serves as a database for all transactions. Miners, who run the blockchain algorithm on their computers, are rewarded with a certain number of bitcoins for solving the computational task. This decentralized process creates money. Pool mining involves multiple individuals combining their computer power to increase the chances of finding the correct solution and earning a share of the newly mined bitcoins based on the contributed computing power. Cloud mining, on the other hand, allows participants to invest capital with a cloud mining provider who performs the mining on their behalf.[62] Participants receive a portion of the mined cryptocurrency (minus a fee) from the mining provider, who charges a fee for their services.The VAT consequences of bitcoin mining only apply under specific conditions outlined in the relevant regulations. These conditions include the provision of a service by a taxable entity in Germany, with a clearly identifiable recipient of the service in an exchange relationship.[63]

Entrepreneurs within the meaning of VAT law can be natural persons, legal entities and other legal entities if they provide services for remuneration on a sustained, independent basis and with the intention of generating income. The decisive factor is that a person or a legal entity appears externally. A miner as a natural person can - depending on his concrete activity - appear externally, but a pool in which several persons bundle the services of their computers for the purpose of so-called pool mining is different. In this case, the individual miners do not appear externally. The pool is a non-taxable service association, usually in the form of a Civil law partnership,[64] which is not suitable as a taxable subject. In this respect, there is already a lack of a sufficient degree of organisation.The cloud mining provider appears externally. By providing its computing power, it renders another service to

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TUMPEL, *Digitale Währungen im Steuerrecht – Beispielfall Bitcoin*, in E. FELTEN- G. KOFLER- M. MAYRHOFER – S. PERNER – M. TUMPEL (a cura di), *Digitale Transformation im Wirtschafts- & Steuerrecht*, 2019,Rz 13/31; A.F.URICCHIO, *The Future cit.*, 2022; Schlund/Pongratz, Distributed-Ledger-Technologie und Kryptowährungen–eine rechtliche Betrachtung, DStR 2018, 598 (602). Die Steuerbarkeit der Transaktionsgebührenwird überwiegend abgelehnt, weil sich ein Leistungsort nicht feststellenlässt, zB Pielke, Umsatzsteuerliche Behandlung von Bitcoins nach dem Urteildes EuGH, MwStR 2016, 150 (152). Andere stellen darauf ab, dass Transaktionsgebührenfreiwillig gezahlt werden und daher kein unmittelbarer Zusammenhang mitder Leistung des Miners bestehe, vgl dBMF 27.8.2018 – III C 3 – S 7160-b/13/10001,DStR 2018, 528.

[60] S. KIRCHMAYR-SCHLIESSELBERGER – W. KLAS – M. MIERNICKI - S. RINDERLE-MA- A.WEILINGER *Kryptowährungen cit.*, p. 262 ss; Dazu: Enzinger, *Mining von Kryptowährungen*, SWK 23/24 2017, 1013;

[61] Enzinger, Mining von Kryptowährungen, SWK 23/24 2017, 1013.

[62] Dietsch, Umsatzsteuerliche Behandlung von Bitcoin-Mining, MwStR 2018, 250 (251).

[63] S. KIRCHMAYR-SCHLIESSELBERGER – W. KLAS – M. MIERNICKI - S. RINDERLE-MA- A.WEILINGER *Op. cit.*, p. 262 ss.

[64] *Op.ult.cit.*, p. 263 ff.; Dazu: Behrendt/Janken, Kryptowährung – das digitale Fremdwährungskoto, DStZ2018, 342 (349).

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the respective client.

4.4 Concluding remarks regarding the taxation aspects of cryptocurrencies from a German and Austrian angle

In view of the procedural taxation question from a german angle it should be stated that the increased practical relevance of tokens is accompanied by increased attention from the tax authorities. Many detailed questions are still unclear. In terms of procedural taxation law, the question will arise as to who will take over the task currently assigned to the banks of providing tax-relevant account movements up to the deduction of the final withholding tax. The question also arises as to which options will be available to the tax authorities in the future to verify the declared tax data or to uncover false declarations. It seems to make the most sense to assign this task to intermediaries, since intermediaries can most reliably provide the data required by the tax administration. Such a reporting obligation usually does not only concern Germany. In order to avoid a multitude of confusing regulations, only a uniform European standard with a single point of contact for intermediaries can represent a practicable solution. For taxpayers, therefore, the question of the duty to cooperate arises in particular, which can affect them when submitting a personal income tax return. Due to the complex technical circumstances and the international nature of token trading, taxpayers may be subject to increased obligations to cooperate under Section 90 (2) of the Tax Code. This provision is generally applicable to foreign matters and imposes an obligation on the party involved to clarify the facts and obtain evidence.[65] Investors are not only confronted with complex technical issues when investing in crypto tokens, the tax treatment is also not yet clear. The German tax administration has so far only commented on the income tax treatment of income from purchases and sales as well as from mining of currency tokens. For other types of tokens and for ICOs, there is still considerable legal uncertainty, as there is still no case law on this topic. Until the legislator provides clarity, investors can apply for binding information pursuant to Section 89 (2) of the German Tax/Fiscal Code (AO) for legal questions on precisely defined issues. More precise legal provisions and thus more legal certainty would increase Germany's attractiveness as a trading center for tokens and as a location for ICOs, so that investors could also benefit from the high regulatory quality in Germany.

With regard of the Austrian value added tax aspects it should be remarked that, The VAT treatment of cryptocurrencies has been partially clarified by the ECJ, but is still subject to VAT uncertainties. According to the decision of the ECJ in the Hedqvist case, bitcoins are a recognised means of payment alternative to legal tender. Bitcoins

[65] G. KOFLER - J. SINNIG, *Equalization Taxes and the EU's 'Digital Services Tax'*, 47 *Intertax* 176, 2019, pp. 176–200.

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are recognised by the ECJ as currency and thus also as consideration in terms of VAT law. If a payment for a service subject to VAT is made in Bitcoins, this - as the relevant consideration - is decisive for the basis of assessment for VAT. Like other currency exchange transactions, the exchange of Bitcoins into a conventional currency is also exempt from VAT, even if this has not yet been sufficiently clarified in the national legal wording. The same applies when Bitcoins are exchanged for another cryptocurrency with a payment function.[66] If bitcoins are used as a means of payment, they are "remuneration" within the meaning of the VAT Act and the basis of assessment for VAT. It has also been clarified that the exchange of a virtual currency with a payment function into a legal tender is exempt from VAT. The decisive factor is the payment function of the (virtual) currencies exchanged. Therefore, the exchange of virtual currencies other than bitcoins is also tax-exempt if the exchanged currency is recognised as a means of payment.[67] The tax classification of mining has not yet been conclusively clarified. According to the opinion expressed here, bitcoin mining is generally not subject to VAT for several reasons: As a rule, the intention to generate income is lacking due to the gambling nature of the activity. Furthermore, in the absence of an exchange relationship, it is not possible to identify the recipient of the service and thus the place of performance cannot be determined. The only exception is the cloud mining provider. The latter provides electronic services to its contractual partners (clients) in return for a fee. This means that there are exchange relationships and identifiable recipients of services. The place of performance (at the recipient's location) is identifiable. If the recipient of a cloud mining provider domiciled abroad is an entrepreneur, the recipient domiciled in Austria is liable for VAT according to the reverse charge procedure (§ 19 para. 1 UStG).For other cryptocurrencies, or tokens, it depends on whether they are means of payment or confer other rights according to their function. While the same VAT consequences apply to means of payment as to bitcoins, a differentiation must be made for VAT purposes: Utility tokens are regularly treated as multi-purpose vouchers for VAT purposes. The transfer of the utility tokens is therefore not subject to VAT. Only the subsequent redemption triggers a VAT event. For equity tokens and deposit tokens, the tax exemption regulation for securities or company shares applies, depending on the specific structure of the rights associated with the tokens

[66] For an insight regarding VAT cfr. J. CARAGHER, *Global VAT GST on digital services to consumers*, 2023; EUGH 29.4.2004, C-77/01, EDM; D. AIGNER- P. BRÄUMANN – G. KOFLER- M. TUMPEL, *Digitale Währungen im Steuerrecht – Beispielfall Bitcoin*, in E. FELTEN- G. KOFLER- M. MAYRHOFER – S. PERNER – M. TUMPEL (a cura di), *Digitale Transformation im Wirtschafts- & Steuerrecht*, 2019, Rz 13/29; F. L. GIAMBRONE, *Protection in Germany oft he Fundamental Rights oft he European Union GRCH*; A. F. URICCHIO, *The Future of European Environmental Policy* cit., 8, 2022; Case note of the BVERF Constitutional Court 1ST SENATE, RESOLUTION OF 06.11.2019 # 1 BVR 16/13 concerning the interpretation of the importance of the fundamental rights within the basic law with regard to non fully harmonized EU law, , p. 523 ff.

[67] S. KIRCHMAYR-SCHLIESSELBERGER – W. KLAS – M. MIERNICKI - S. RINDERLE-MA- A.WEILINGER *Kryptowährungen cit.*, p. 270 ss

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(Art 135 (1) (f) VAT Directive or § 6 (1) (8) (f) or (g) VAT Act).[68]The EU Parliament proposes the introduction of a European tax on crypto assets[69], with the revenues raised going into the EU budget as new own resources. It points out that the global crypto market has grown rapidly (albeit unstably) since the 2008 crisis, with capitalisation reaching up to EUR 2 trillion in May 2021. It further notes that crypto assets are gradually being considered as a genuine means of payment and part of investment strategies and stresses that the regulation and taxation of crypto assets is more efficient at EU level than at national level, given their high mobility and cross-border dimension. [70]In this context, it is stressed that a European tax on crypto assets would foster the development of a harmonised tax framework for crypto assets, be more consistent with the cross-border nature of the crypto asset market and promote the adoption of tax standards at global level.[71]The EU stresses that several taxation options for crypto assets are possible, such as a tax on capital gains from crypto asset activities (based on a uniform tax rate for all EU Member States), a tax on crypto asset transactions or a tax on crypto asset mining and trading, determined according to their electricity consumption and environmental impact. Furthermore, Parliament calls on the Commission to assess the impact of these options on the European crypto market, estimate the potential revenue and present a concrete proposal.[72]

5 General conclusions and future perspectives

Considering the potential motivations and approaches behind the EU's endeavor to establish a regulatory framework for crypto assets, aiming to foster innovation and ensure user protection, it becomes important to understand the reasons behind these efforts. The utilization of crypto assets and their underlying technology has displayed significant promise alongside inherent challenges. Therefore, the EU is proactively formulating regulations to facilitate the progress of these technologies and their integration within the EU, all while enacting measures to safeguard users.[73]
The digital transformation is among the top priorities of the EU. The European Parliament contributes to shaping policies that strengthen Europe's capabilities in new digital technologies and create new opportunities for businesses and consumers. Additionally, the EU aims to advance its green transformation with the objective of

[68] S. KIRCHMAYR-SCHLIESSELBERGER – W. KLAS – M. MIERNICKI - S. RINDERLE-MA- A.WEILINGER *Kryptowährungen cit.*, p. 270 ss.
[69] EU PARLAMENT, Entwurf eines Berichts, über das Thema „ Ein Neubeginn für die Finanzen der EU, ein Neubeginn für Europa", p 9 ss.
[70] EU PARLAMENT, op.cit., p 9 ff.
[71] EU PARLAMENT, Op.ult.cit.,, p 9 ss; A. F. URICCHIO, *Die umweltsteuern und das umlaufsteuersystem*, in A.F.URICCHIO, F. GIAMBRONE, *Entwicklungen im italienischen Steuerrecht als Herausforderung des neuen europäischen Entwicklungsprozesses,* Bari 2020,p. 178 ss.
[72] For an insight regarding VAT cfr. J. CARAGHER, *Global VAT GST on digital services to consumers*, 2023; EU PARLAMENT Entwurf cit.,p 9 ff.
[73] EU PARLAMENT, *Die Gefahren von Kryptowährungen und der Nutzen der EU-Gesetzgebung*, 2023, p. 1 ss..

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achieving climate neutrality by 2050. The Parliament promotes policies that enhance the digital skills of citizens, encourage the upskilling of workers, and support the digitalization of public services. Throughout these efforts, Members of Parliament strive to uphold fundamental rights and European values. Promoting digitalization brings numerous benefits to society. The EU aims to strengthen its digital sovereignty and set its own standards instead of adhering to standards set by others, in order to make Europe fit for the digital age.[74]To steer the digital transformation in the EU, the European Commission has presented the policy program "Europe's Digital Decade," which outlines specific objectives and targets for 2030 in areas such as skills, secure and sustainable digital infrastructure, digital transformation of businesses, and digitization of public services.[75] In May 2021, the Parliament adopted a report on shaping Europe's digital future, urging the Commission to further address the challenges of digital transformation. Specifically, it calls for harnessing the opportunities of the digital single market, improving the use of artificial intelligence, and supporting digital innovation and skills. Cryptocurrencies also entail various risks. The absence of a central register and central authority, which allows for secure and direct transactions between two parties without an intermediary, constitutes part of the appeal of cryptocurrencies. However, significant risks arise from this, necessitating new EU regulations.[76]It is worth noting the risks that cryptocurrencies pose to consumers, businesses, and markets. The new regulations address many of the risks associated with crypto assets. Currently, trading in cryptocurrencies is not covered by EU consumer protection regulations. Individuals engaging in cryptocurrency trading often lack sufficient information about the risks involved, which can lead to financial losses. The widespread use of unregulated cryptocurrencies could result in financial instability, market manipulation, and financial crimes. Due to the largely anonymous nature of transactions, cryptocurrencies are frequently utilized for illicit activities. Since the beginning of the conflict in Ukraine, EU member states have restricted the trading of cryptocurrencies for use in Russia or with Russian entities.[77]The environmental

[74] G. KOFLER - J. SINNIG, *Equalization cit.*, pp. 176–200; EU PARLAMENT, *Den digitalen Wandel gestalten: EU-Strategie erklärt*, 2023.

[75] EU PARLAMENT, *op.cit*., 2023; A. F. URICCHIO, *Die zwischen der Haushaltsaufsicht, den ausserordentlichen Finanzinstrumenten und der sogenannten windfall taxes anfallenden kosten der Sozialrechte*, in A.F. URICCHIO - F. L. GIAMBRONE, *Entwicklungen im italienischen Steuerrecht als Herausforderung des neuen europäischen Entwicklungsprozesses*, 2020, p.131-173, p. 138 ss; A. F. URICCHIO, *Die umweltsteuern und das umlaufsteuersystem*, in A. F. URICCHIO - F. L. GIAMBRONE, *Entwicklungen im italienischen Steuerrecht als Herausforderung des neuen europäischen Entwicklungsprozesses*, 2020,p. 178 ss; per un Commentario breve alla costituzione italiana si rimanda a P. DE GIOIA CARABELLESE - PAGLIARIN, *The Banking Bail in and Costitutional rights*, in *LUISS Law Review*, 2020, pp. 7 ss.

[76] EU PARLAMENT, *Die Gefahren von Kryptowährungen und der Nutzen der EU-Gesetzgebung, 2023*, p. 1 ss.

[77] G. KOFLER - J. SINNIG, *Equalization cit.*, pp. 176–200; EU PARLAMENT, *Op.cit*., 2023, p. 1 ff.

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impact of cryptocurrencies is another crucial aspect to consider.[78]The technology consumes significant amounts of electricity, resulting in a large ecological footprint. Estimates suggest that the energy consumption of Bitcoin is equivalent to that of a small country.[79] This footprint generated by cryptocurrencies contradicts the priorities outlined in the European Green Deal of achieving net-zero emissions by 2050. In 2021, the EU legally committed to achieving climate neutrality, which means the goal of no net emissions by 2050, with an intermediate target of reducing emissions by 55 percent by 2030.[80]The goal of net-zero emissions is enshrined in the Climate Law, and the European Green Deal serves as the roadmap for the EU to become climate-neutral by 2050.The specific legislation enabling Europe to achieve the objectives of the Green Deal is outlined in the "Fit for 55" package, which the Commission presented in July 2021. This includes the revision of existing regulations on emissions reduction and energy, among other measures explained below. The EU is also working towards achieving a circular economy by 2050, creating a sustainable food system, and protecting biodiversity and pollinators. To ensure the financing of the Green Deal, the European Commission introduced the Investment Plan for a Sustainable Europe in January 2020, aiming to mobilize at least one trillion euros of public and private investments over the next ten years. As part of the Investment Plan, the Just Transition Fund will support regions and communities most affected by the green transition, such as regions heavily dependent on coal.[81] The efficacy of the new EU crypto regulation at this juncture is to be emphasized. The EU has undertaken efforts to establish new regulatory frameworks, known as Markets in Crypto-Assets (MiCA), in order to foster the potential of crypto-assets while simultaneously mitigating associated risks. In June 2022, the Parliament and the Council reached a provisional agreement, which received formal approval from the Parliament in April 2023 and from the EU member states in the Council in May 2023, thus culminating the legislative process. The objective of the newly introduced regulations is to provide legal certainty, facilitate innovation, safeguard the interests of consumers and investors, and ensure the stability of the financial system in support of the development and utilization of these technologies.

Ensuring financial stability and protecting consumers is a main objective pursued. Regulating the public offering of crypto-assets serves to uphold financial stability. The regulatory framework encompasses transparency, disclosure, authorization, and monitoring of transactions. The intention of the Members of Parliament is for the issuance of certain crypto tokens to fall under the oversight of the European Securities and Markets Authority and the European Banking Authority. Companies

[78] E- CLEAR, *DAC-8 und ihre Auswirkungen auf Kryptowährungen*, 2023.
[79] EU PARLAMENT, *Die Gefahren cit.*, 2023, p. 1 ss.
[80] EU PARLAMENT, D*ie Antworten auf den Klimawandel*,2023, p. l ss.
[81] EU PARLAMENT, *op.cit.*,2023.

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engaged in crypto-asset trading are required to enhance consumer awareness regarding risks, costs, and fees. In March 2022, the Parliament additionally enacted regulations pertaining to the utilization of distributed ledger technologies, such as blockchains, for trading crypto-assets. These technologies enable the recording of interactions and transfers involving crypto-assets. The purpose of this legislation is to promote the development of solutions for trading crypto-assets, while simultaneously maintaining a high degree of financial stability, transparency, and market integrity. Addressing the environmental implications of cryptocurrencies is a challenge, which is handeld by the EU.In order to reduce the considerable carbon dioxide emissions linked to cryptocurrencies, the MiCA regulations impose obligatory disclosure obligations on prominent providers of crypto-assets concerning their energy consumption.[82]In the European Council meeting in March 2021, it was emphasized that the digital transition, along with sustainability, would be the foundation for post-pandemic recovery. This would be achieved through a global solution agreed upon at the OECD level. This idea was further implemented in the G7 Finance Ministers' meeting in London on June 5, 2021, proposing a "global minimum tax" of 15% on the profits of large multinational corporations, regardless of their operating location. On October 8, 2021, 130 OECD member countries representing over 90% of global GDP committed to reforming international tax rules through a two-pillar model to combat tax avoidance and ensure profits are taxed where economic activities and value creation occur.[83]This measure received final approval at the G20 summit in Rome on October 30-31, 2021. Its aim is to establish fair tax rules by globally taxing large networked companies. On December 22, 2021, the European Commission proposed a directive based on the OECD agreement, introducing an effective minimum tax rate for global activities of large multinational groups, to be applied consistently and correctly throughout the European territory. The proposed global minimum tax would have a minimum rate of 15% on taxable income generated by multinational groups operating in the digital sector, subject to certain quantitative thresholds. Exceptions are provided for real economic activities (companies can exclude a portion of their revenues from taxation equal to 5% of tangible assets and 5% of wages) or for minimum profit amounts. These documents provide a more detailed explanation of the two pillars while also suggesting a tax moratorium on various forms of levies under study. Starting from 2023, the proposed provisions are expected to come into effect, which would entail the abolition of the European Digital Services Tax, which had faced criticism primarily from American

[82] G. KOFLER - J. SINNIG, *Equalization cit.*, pp. 176–200; P. PARDOLESI, *Sostenibilitá cit.*, 2023; for an intalian overview regarding digital taxation cfr. A. F. URICCHIO – S.A. PARENTE, *Data driven e digital taxation: prime sperimentazioni e nuovi modelli di prelievo*, in *Diritto e pratica tributaria internazionale*, n. 2/2021.

[83] Cfr. M. GREGGI, *La tassazione dell´economia digitale nel contesto europeo: la proposta di direttiva sulla Digital Service tax*, in *Diritto Mercato tecnologia*, 2019, pp. 99-129; A. F. URICCHIO, *L´imposizione cit.*, p. 110 ss.

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internet giants. There is even a provision for a sort of tax credit to reimburse any excess amounts paid compared to the global tax. More specifically, the so-called "Pillar One," also known as the "Unified Approach," aims to revise income allocation and profit allocation criteria in the digital economy. This involves modifying transfer pricing rules within multinational corporations, deviating from the arm's length principle, and introducing new "nexus rules" based on concepts such as user participation and significant digital and economic presence. The objective is to establish a taxation power for jurisdictions where consumers and users of digital business models are located, moving away from the traditional concept of permanent establishment.[84]The implementation of this model requires international norms on how to allocate taxing rights among multiple countries for the profits of the largest and most profitable multinational corporations, even considering their ability to operate without a physical presence. The adoption of the second pillar of the OECD agreement, known as the "Global Anti-Base Erosion Proposal" (GloBE), is even more complex. It involves subjecting web-based multinational corporations to a minimum level of global taxation and requires modifications to domestic legislation and double tax treaties to counteract base erosion and profit shifting to low-tax or no-tax jurisdictions.[85]The "Pillar Two," also followed by a public consultation, consists of two closely related rules: the Income Inclusion Rule (IIR) and the Undertaxed Payment Rule (UTPR), which exclude deductions or require adjustments. The IIR allows states to tax income generated by permanent establishments or controlled foreign corporations if they are not subject to effective minimum taxation in the country where the income is earned. The UTPR assigns taxing rights to the source country to exclude withholdings or deductions for payments to related parties that are not subject to a minimum level of effective taxation in the recipient's country of residence, up to a certain threshold.[86]In addition to these domestic rules, there are other provisions based on multilateral instruments. These include the inclusion of a "switch-over rule" in double tax conventions, allowing a state to switch from exemption to the credit method if income from a permanent establishment or real estate asset is not subject to a minimum level of taxation in the source country. Another provision is the "subject to tax rule," which determines whether more favorable treaty provisions apply based on whether a component of income is subject to a minimum level of taxation. The challenges of implementation lie in translating the agreements reached into a stable and shared regulatory framework. The issue of revenue thresholds (20 billion euros, approximately 23.1 billion dollars) and a 10% profit requirement is particularly delicate. Moreover, the very high minimum

[84] Cfr. In this matter the documents of the OECD: OECD, *Addressing the Tax Challenges of the Digital Economy*, Action 1–2015 Final Report, OECD/G20 Base Erosion and Profit Shifting Project, 2015.
[85] Cfr. A. F. URICCHIO, *op.cit.*, p. 113 ss.
[86] Cfr. A. F. URICCHIO, *op.ult.cit.*, p. 114 ff.

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revenue threshold means that the proposed regime would only apply to a very limited number of multinational companies (in 2020, the OECD estimated that only 350 multinational companies would exceed the consolidated threshold of 10 billion euros). The proposed solution, considering the acknowledged burden and complexity, along with the necessary coordination among tax administrations, seems to indicate an intention to limit its application to the highest tier of digital multinational corporations. This could inhibit the introduction of new forms of taxation by tax legislators, which could target the new and ever-evolving manifestations of wealth in the new economy.[87] However, the digital landscape is not only populated by large network-based companies that generate substantial untaxed profits, but also by digital enterprises of various sizes that provide services to both private clients and the "masters of the network" themselves. The agreed-upon block on new taxes may appear entirely inadequate in the face of emerging modes of network access and utilization (such as the Internet of me) and even for exercising fiscal control over the dark web and deep web. It is known that these terms refer to obscure networks not accessible through regular private networks, often associated with illegal economic activities. According to the reached agreement, starting from October 2021, none of the participating countries can unilaterally introduce new taxes or charges on digital services. Existing taxes should (or rather, should) be repealed for all companies subject to them by the end of 2023.[88] It is evident that the agreement reached is just the first step towards the introduction of a global minimum tax and the overall consolidation of the regulatory framework outlined. In the coming months, both domestic regulations and new bilateral agreements are expected to be adopted, along with a multilateral instrument, in addition to the aforementioned directive proposal, which should be approved by the Council, subject to unanimous agreement, following the advisory opinion of the European Parliament. The path is not straightforward, as Hungary announced in June 2022 its intention to veto the new tax, and the position of Poland is still unclear.[89]

[87] Cfr. M. GREGGI, *La tassazione cit.*, pp. 99 ss; A. F. URICCHIO, *L´imposizione della data economy tra proposte di nuove forme di prelievo, web tax italiana e global minimum tax*, in, F. GALLO - A. F. URICCHIO, *La tassazione dell´economia digitale tra imposta sui servizi digitali, global minimum tax e nuovi modelli di prelievo*, 2022, p. 116 ss

[88] Cfr. A. F. URICCHIO, *op.cit.*, p. 117 ff.

[89] Cfr. A. F. URICCHIO, *op.ult.cit.*, p.117 ss.

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