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TAX IN THE METAVERSE: EU PERSPECTIVE

Abstract

The metaverse's rising prominence spans diverse sectors, presenting new economic opportunities. However, it also challenges tax policies and enforcement. This article examines the metaverse's taxation complexities and proposes EU legal solutions and seeks to confirm the hypothesis that the existing EU tax law is sufficient to address tax evasion in the metaverse, as it provides comprehensive provisions that can be effectively applied to virtual transactions.

A mixed-method approach has been utilised for this paper, combining a literature review and analysis of EU laws to understand taxable activities in the metaverse. Analogies were frequently employed to elucidate virtual and real-world asset differences. While the literature tends to be somewhat outdated, it provides good theoretical insights. However, these insights must be critically considered due to rapid technological changes over the past decade, serving as guiding principles rather than rigid policy directives.

Key words: Metaverse, Taxation, EU law, Tax compliance.

JEL Classification: K34, H26.

1. Introduction

As the idea of developing a form of metaverse is experiencing a boom among companies across industries – from Big Techs over start-ups over governmental bodies and NGOs to

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workforce agencies, authorities are looking into the new challenges that metaverse will bring. Albeit at this point technological advancement does not provide for the Metaverse as it is envisioned for the future, first virtual spaces are offering a "sneak peek" into what the next stage of the Internet will look like are emerging.

The metaverse has the potential to create a new digital economy level playing field where users can engage in various commercial activities such as virtual goods and services trading, virtual real estate transactions, and virtual advertising. European Parliament expects the metaverse to fully develop its potential within the next 6-8 year. Kasiyanto [Kasiyanto, 2022, pp. 299 – 322] estimates that the global metaverse market will generate revenue at USD 678.8 billion by 2030.

Lawmakers will need to determine how to effectively tax these digital transactions and ensure that revenue generated within the metaverse is appropriately captured. Given the cross-border nature of the metaverse, they will also need to address issues related to determining the jurisdiction of virtual transactions and establishing frameworks for international cooperation to avoid double taxation and tax evasion.

Enforcing tax compliance within the metaverse presents another unique challenge. Mechanisms ensuring that individuals and businesses accurately report their virtual transactions and pay the appropriate taxes are yet to be developed. This may involve implementing monitoring systems, establishing reporting requirements, and leveraging blockchain or other technologies for transparency.

It is thus timely to review the readiness of the EU law to face the possibility of tax optimalization in this novel environment. This article aims to shed light on the complexities of tax evasion in the metaverse and explore potential solutions to tackle this issue within the EU legal framework.

I will work with the hypothesis that the existing EU tax law is sufficient to address tax evasion in the metaverse, as it provides comprehensive provisions that can be effectively applied to virtual transactions, ensuring fair taxation, compliance, and enforcement within this virtual environment.

Methods used include literature overview, top-line analysis of the relevant European Union laws and OECD frameworks, and synthesis of the findings drawn from both types of sources. Descriptive method applied to the discourse on identifying taxable activities in the metaverse often resorts to analogy as to explain the difference and similarities of different assets in virtual and offline realities.

The literature debating this topic tends to be outdated, however, remains a resource for theoretical questioning of the nature of the transactions carried out in virtual worlds. Its reflections and conclusions can be applied to the current research up to a certain extent, if approached critically. Most of the identified literature dates from ten or more years ago. Given the speed development of technology over the past decade, the thoughts of the authors need to be considered as a guide for academic thinking rather than a dogmatic view on the development of tax policies in the light of advanced technology.

2. Identifying taxable activities in the metaverse

The metaverse has emerged as a dynamic and immersive digital environment, redefining the way individuals interact, transact, and conduct business. Within this virtual realm, a range of transactions takes place, raising questions about their nature, legal implications, and regulatory challenges. This chapter aims to explore and analyze the distinctive features and complexities of transactions in the metaverse within the context of legal frameworks.

Corporate activity in the metaverse refers to the business operations conducted by companies or organizations within virtual environments. That might encompass online shopping and virtual goods purchases, advertising and organizing virtual events, intellectual property licensing, monetary transfers related to physical purchases, savings account deposits, investments in crypto assets, and many others. It is imperative to recognize their distinctive characteristics. These transactions are facilitated through functional software, constituting a fundamental and indispensable element. They typically involve a minimum of two parties, with a third-party platform often serving as an intermediary to facilitate the transaction, and they are conducted without the need for physical currency. Additional features that define digital transactions include security, swiftness, the absence of direct interpersonal contact between the transacting parties, and a certain level of pseudonymity. The term pseudonymity is employed intentionally, acknowledging that the degree of anonymity in a transaction is relative. While the involved parties may remain unidentified, each transaction leaves traceable footprints within the system, subject to specific circumstances and conditions. Pseudonymity assumes significance as an element that is likely to undergo transformation within the Metaverse context.

These activities can generate revenue, assets, and economic value, which may be subject to taxation under applicable tax laws. For the purpose of this work, I will work with corporate income tax emerging from such activities. The following text will thus identify and examine

the challenges related to taxing corporate income from activities that occurred in the metaverse as a fully virtual space. To assess the nature of a taxable income, it is needed to identify the applicable law of the relevant jurisdiction. As the metaverse is likely to be a global phenomenon, with users and businesses operating across international boundaries, the question of the location of the parties to the transaction or the transaction itself will be the main challenge.

2.1 Emerging taxes from those transactions

Authors of European Parliament's report on the implications of the metaverse for the Single Market from June 2023 agree that the shift of wealth and resources away from individuals and states that will occur in the metaverse due to its decentralized nature will enable massive profit movements and concentration without redistributing through taxation. The role of taxation in this context is that of preventing monopolization and keeping the benefits originating in the EU in the relevant jurisdiction to ascertain their just redistribution. They also note that Ireland, where most of the major metaverse players are based, is commonly known for its tax laws enabling profit shifting and aggressive tax planning of these companies.

2.2 Tax evasion

Tax evasion in the metaverse refers to the deliberate and illegal act of evading or avoiding tax obligations within virtual environments. It involves individuals or companies engaging in activities to intentionally conceal, manipulate, or underreport their virtual transactions, assets, or income to evade paying taxes. Some of the foreseeably common methods include:

- Non-disclosure of virtual income: Individuals or companies may fail to report or disclose their virtual income earned from virtual goods sales, virtual currency exchanges, virtual real estate transactions, or other economic activities within the metaverse.
- Misrepresentation of virtual transactions: Tax evaders may manipulate or misrepresent the value of virtual transactions to understate their taxable income. This can include undervaluing virtual assets or engaging in sham transactions to artificially reduce their tax liabilities.
- Offshore structures and tax havens: Utilizing offshore companies or entities in tax havens, tax evaders can move their virtual assets or income to jurisdictions with minimal or no taxation. They may establish complex structures to hide the true

ownership or control of virtual assets, making it difficult for tax authorities to trace and tax these funds.

- Virtual currency conversion: Tax evaders can exploit the decentralized and anonymous nature of virtual currencies to convert their virtual assets into cryptocurrencies or other forms of digital value, making it challenging for tax authorities to track these transactions and assess tax liabilities.
- Identity concealment: Some individuals or companies may create virtual personas or use anonymous accounts within the metaverse to conduct transactions and accumulate wealth without revealing their true identities. This anonymity makes it difficult for tax authorities to identify the individuals or entities involved and enforce tax regulations.
- Virtual asset laundering: Tax evaders may employ methods to launder illicit funds through virtual assets within the metaverse. They can convert illegally obtained funds into virtual currencies or virtual goods, making the origins of the funds difficult to trace and tax.

Some of the less discussed possible methods include investing in virtual assets that are not recognized by the law as possessable, and thus not subjectable to a tax. An example is investing in non-fungible tokens[1] (NFTs) and trading virtual land.

NFTs are generally categorized as so-called utility tokens, meaning that they are primarily intended to associate with digital or tangible value. However, there are instances where NFTs could be deemed as securities, particularly when they represent co-ownership interests in real assets, contingent upon the nature and characteristics of the NFT in question [Garbers von Boehm, 2022, p. 12]. An NFT is a smart contract with metadata that uses a blockchain to create a unique, non-fungible digital "asset" which can be owned and traded. Presently, NFTs primarily manifest in the form of virtual artworks, fashion items, avatar attributes, and similar assets.

Each newly created NFT possesses its own distinctiveness, and its value evolves over time. While it is impossible to completely prevent the replication of original NFTs, just as it is impossible to prevent the production of copies or forgeries of physical artworks, only one individual can claim ownership of the original token. The presence of NFTs in the digital realm facilitates straightforward verification of ownership. The transfer of ownership involves a

[1] NFTs, or Non-Fungible Tokens, are digital assets that represent ownership or proof of authenticity of unique items or content, often using blockchain technology. Unlike cryptocurrencies such as Bitcoin, NFTs are not interchangeable or mutually substitutable, as each one is distinct and cannot be replicated. They are commonly used for owning digital art, collectibles, music, in-game items, and other digital or physical assets.

two-step process, typically initiated by a smart contract, a computer code-based mechanism. The involved parties provide relevant information and negotiate the transaction's terms. Once the predetermined condition encoded in the smart contract, such as the receipt of the NFT's price in the originator's wallet, is met, the transaction is recorded on the blockchain. Consequently, the buyer acquires the ownership rights to the specific NFT, or more precisely, a registration certificate affirming their entitlement to the digital copy of the underlying work. In essence, writing functions as a method of operation. Simultaneously, this registration guarantees the immutability of the transaction, as it cannot be modified in any manner after its occurrence. The recorded information not only serves as undeniable evidence of the ownership acquisition of the NFT but also as a testament to its origin and originality.

Anyone who purchases an NFT acquires ownership of the token itself, which serves as a digital certificate of ownership tied to a specific digital asset. This ownership is established on the blockchain and cannot be easily transferred or disposed of by the new owner unless accompanied by additional rights associated with the copyright license. Consequently, if the digital work is not sold with any additional rights, the new owner does not possess the authority to further transfer or dispose of the NFT.

Nevertheless, the notion of ownership and the consequent tax obligations related to NFTs have not been explicitly defined within any legal framework, resulting in a legislative gap. The legal characterization of NFT possession is derived from existing laws, leading to significant variations, particularly between common law and European continental law. For instance, under common law, the acquisition of ownership rights to an NFT and the associated copyright over the underlying work are generally permissible, typically due to its preference to contractual regulation. Conversely, European continental law diverges considerably in its approach. For instance, according to the Czech civil code (Act No. 89/2012 Coll., Civil Code, as amended), an NFT would be categorized as an intangible thing in accordance with the provisions of § 496, paragraph 2. It is considered a movable asset that is indivisible and inalienable as per the subsequent provisions of the Civil Code. However, the rising popularity of NFTs has led to the emergence of the principle of irreplaceability, particularly with the introduction of fractional NFTs. Fractional NFTs allow owners to divide an NFT into multiple pieces, enabling more individuals to acquire partial ownership and stake in a specific NFT. In essence, it represents the acquisition of a fractional interest in an NFT [Brostíková, 2022]. Czech law would thus recognize legal ownership of an NFT to a certain extent.

Contrary to that, under German civil law, it is not possible to recognize NFTs as a thing, object, that could become property according to § 90 of the German Civil Code (BGB) due to their lack of physical form as purely digital tokens. Ownership in the strict sense defined in § 903 of the German Civil Code, which applies to tangible and spatially definable objects, is therefore not applicable to NFTs. The principle of *numerus clausus* in property law typically prohibits the analogous application of property rights to intangible assets as well. However, there is ongoing discussion regarding the analogous application of § 903 of the German Civil Code based on the unique characteristics of NFTs.

Finally, in EU law, whether the buyer of an NFT acquires any rights to use the work represented by the NFT depends on the agreements made. In the absence of specific agreements, the buyer of the NFT will not obtain any rights beyond those provided for in the exceptions for private use outlined in Article 5 No. 2 b) of Directive 2001/29/EC, which addresses the harmonization of certain aspects of copyright and related rights in the information society.

These misalignments in legal definition and regulatory framework surrounding NFTs vary among European countries, leading to inconsistencies in how these digital assets are classified for tax purposes. Some jurisdictions may view NFTs as intangible assets, while others may consider them as forms of intellectual property or even as financial instruments. This lack of uniformity creates an environment where companies can exploit these differences to their advantage, engaging in tax planning strategies aimed at reducing their tax burden.

By strategically structuring their NFT transactions across jurisdictions, companies can take advantage of more favorable tax treatments. They can exploit jurisdictions with lower tax rates, generous exemptions, or specific tax incentives for certain types of transactions through transfer pricing manipulation. For instance, a company might conduct the sale or transfer of an NFT in a jurisdiction with no capital gains tax or a reduced tax rate, effectively minimizing their tax liability on the transaction, given a specific jurisdiction is even identifiable.

The ambiguity and lack of specific guidelines surrounding the taxation of NFTs further exacerbate the risk of tax evasion. In the absence of clear regulations, companies can exploit uncertainty and engage in aggressive tax planning techniques. They may artificially allocate profits or costs associated with NFTs to different entities within their corporate structure, taking advantage of jurisdictions with more lenient tax regulations. Additionally, the absence

of robust reporting and disclosure requirements for NFT transactions can make it challenging for tax authorities to detect and enforce compliance.

The regulatory landscape surrounding NFTs remains uncertain, as their market continues to evolve. There are two potential scenarios to consider: If the market for NFTs continues to grow and gain traction, regulatory measures may be implemented to address their legal implications. Alternatively, if interest in NFTs diminishes rapidly, the legal system may not need to respond to this phenomenon. It is currently challenging to determine whether NFTs are merely a passing fad or if they will establish themselves as a lasting presence in the realm of alternative investments.

A similar situation, yet more complex, emerges in the question of virtual land – virtual real estate (which word colocation hints the problematic nature itself). Virtual land refers to the concept of owning and transacting virtual plots or parcels of land within a metaverse. In virtual environments, these virtual lands are digital representations of space where users can build structures, establish businesses, or engage in various activities. Virtual land often operates within a decentralized blockchain system, using NFTs to establish and track ownership rights.

Trading real property in the metaverse refers to the practice of buying, selling, and transferring ownership of virtual land or properties within a virtual world. Similar to real-world real estate transactions, users can engage in the buying and selling of virtual properties, including buildings, virtual homes, virtual businesses, or other virtual structures. To a certain extent, rights such as usufructus, *abusus*, alienation, disposition, and *accessio* come into play. These transactions may involve the transfer of ownership rights through the use of NFTs or other digital tokens, which are recorded on a blockchain to ensure authenticity, provenance, and secure ownership transfers.

Here the solution to the question of regulatory framework and tax implications lies in identifying differences and similarities with real-world real estate. For example, Fairfield argues that the application of traditional real-world property law to virtual worlds faces challenges due to the intangible nature of virtual objects and land. Critics contend that virtual property is merely a representation within a database, lacking physical existence. However, it is crucial to recognize that the notion of real-world property itself is based on a shared agreement rather than an inherent reality. Property law functions as a societal construct, aiming to optimize the productive use of land and minimize conflicts over resources. There are no tangible lines demarcating boundaries between countries, as depicted on maps. Similarly, there is no tangible or intrinsic dividing line separating one person's land from

another's in the physical world [Fairfield, 2005: p. 1050]. In essence, virtual land can be owned similarly to any other virtual asset. However, challenges arise when it comes to defining the rights and obligations that accompany such ownership, such as the imposition of land taxes or the generation of income through leasing arrangements. Tang, in particular, argues that the intangible nature of virtual land provides a rationale for excluding it from the scope of traditional real estate law [Tang, 2017: pp. 95-99].

Interestingly, Tang further highlights the practical challenges associated with assigning virtual land to a specific jurisdiction, which has significant implications for regulation and enforceability [Tang, 2017: pp. 95-99. The difficulty lies in determining which legal framework should govern virtual land transactions and resolving potential disputes. In response, Tang introduces the idea of regulating virtual land within specific areas or zones within a virtual world. Nevertheless, to illustrate the ethical challenges to it, she draws a parallel with the differing moral values observed in virtual worlds like Second Life, which digital asset trading into the common awareness, and Grand Theft Auto, a virtual world that explicitly allows criminal activities. This comparison underscores the need to consider and accommodate diverse regulatory approaches within virtual worlds to address the unique characteristics and varied user preferences within these environments.

The critical absence of at least theoretical framework gives a rise to tax optimization through trading such virtual land. Similar to the case of NFTs, subjects could manipulate the pricing of virtual land transactions between related entities within their corporate structure. They also may strategically choose to conduct virtual land transactions in jurisdictions with more favorable tax regimes. They can take advantage of the legal ambiguity of assigning the jurisdictions. Furthermore, companies can establish intricate ownership structures involving multiple subsidiaries, holding companies, or offshore entities to obscure the true ownership of virtual land. By channeling transactions through these structures, they can create tax advantages and potentially reduce their tax liability. And again, the absence of reporting requirements for virtual land transactions could make it challenging to enforce the tax obligations.

It is noteworthy that to date no case of significant tax avoidance through these means has been recorded.

2.1. Policy implications

The virtual nature of the metaverse can present challenges for tax authorities to assert jurisdiction and enforce tax laws. Tax evaders can exploit these jurisdictional complexities by engaging in cross-border transactions or leveraging multiple virtual platforms to avoid or evade tax obligations.

However, first question to address is of technical nature – how to identify non-compliance in fully virtual transaction? Advancement in digitalization brought a number of challenges to tax enforcement, but also offers several key benefits that enhance the effectiveness and efficiency of tax enforcement efforts. Real-time monitoring is facilitated by instant access by the authorities to vast amounts of data from various sources, such as online platforms, e-commerce websites, digital payment gateways, and financial institutions. This abundance of data provides a more comprehensive view of taxpayers' financial activities, with automated systems capable of detecting anomalies or inconsistencies as they happen, allowing for swift intervention when tax evasion is suspected.

These tools can analyse massive datasets at high speeds, identifying patterns and trends that may indicate tax evasion or non-compliance. By applying machine learning techniques, tax authorities can improve their detection models over time, making them more accurate and effective in recognizing new methods of tax evasion, which is particularly facilitated by blockchain. As the blockchain automatically verifies transactions through consensus algorithms, ensuring the accuracy and integrity of the data, smart contracts can be employed to automate tax calculations and payments based on predefined rules. These self-executing contracts can be programmed to trigger tax payments automatically when certain conditions are met, such as the completion of a sale or the accrual of taxable income.

By embedding the compliance rules, tax authorities can proactively monitor and verify tax liabilities without relying solely on taxpayer reporting. Any deviations from the predetermined rules will be immediately flagged, enabling timely intervention and reducing opportunities for tax evasion. With access to comprehensive digital data, tax authorities can create risk profiles for individual taxpayers and businesses. These profiles consider various factors, such as income levels, past compliance history, industry norms, and digital footprints. Risk profiling allows tax authorities to focus their enforcement efforts on high-risk taxpayers, optimizing resource allocation and increasing the chances of detecting tax evasion in fully digital transactions.

3. State of Law: EU tax legislation applicable to the transactions carried in the metaverse

Both the EU and the OECD possess distinct advantages in handling the development and enforcement of tax standards in the metaverse. Entrusting the EU capitalizes on its established regulatory expertise, regional collaboration, and cross-border cooperation mechanisms. On the other hand, the OECD offers a more globally representative approach, leveraging its expertise in international tax matters and broader policy considerations. Both organizations have a history of cooperative but also distorting tax policymaking. This collaboration is based on the shared understanding that a fair and efficient international tax system is essential for economic growth and prosperity.

The EU has competence to regulate direct taxation under Article 115 of the Treaty on the Functioning of the European Union (TFEU). This competence has been used to issue directives on a number of direct tax matters, such as the taxation of dividends, interest and royalties, and the taxation of cross-border mergers and acquisitions.

The OECD has a mandate to promote good governance in taxation under its Convention on the Organisation for Economic Co-operation and Development. This mandate includes developing recommendations on how to prevent tax avoidance and evasion, and how to ensure that tax systems are fair and efficient.

There is a number of tools and mechanisms to promote good governance in taxation stemming from this collaboration available, including:

- The OECD Model Tax Convention, which is a standard tax treaty that has been adopted by over 130 countries.
- The OECD BEPS Project, which is a comprehensive package of measures to address tax avoidance and evasion by multinational companies.
- The OECD Tax Policy Forum, which is a forum for officials from the EU and OECD member countries to discuss and develop proposals for new regulations or guidelines on direct taxation.
- The Joint Tax Policy Forum, which was established in 1996 and provides a forum for officials from the EU and OECD to discuss and develop proposals for new regulations or guidelines on direct taxation.
- The EU-OECD Code of Conduct on Transfer Pricing, which is a set of principles and rules for determining the transfer prices of goods and services between related companies.

- The EU-OECD Convention on Mutual Administrative Assistance in Tax Matters provides a framework for the exchange of tax information between EU and OECD member countries.

The collaboration between the EU and the OECD has been instrumental in ensuring that the international tax system is fair and efficient. This collaboration has helped to prevent tax avoidance and evasion and has helped to ensure that multinational companies pay their fair share of taxes.

The EU and the OECD have worked together on the development of the Common Reporting Standard (CRS), which requires financial institutions to report information about their customers to tax authorities. The CRS was developed by the OECD and is based on the OECD's Model Tax Convention. The EU has adopted the CRS through the Directive on Administrative Cooperation in Tax Matters (DAC1-8).

The EU and the OECD have worked together on the development of the Base Erosion and Profit Shifting (BEPS) project, which aims to address tax avoidance and evasion by multinational companies. The BEPS project was launched by the OECD in 2013 and has resulted in a number of recommendations on how to reform the international tax system. The EU has adopted a number of measures based on the OECD's BEPS recommendations, such as the Directive on Common Reporting Standards (CRS) and the Directive on Anti-Tax Avoidance Measures (ATAD).

To examine how does the EU legislative landscape provide for regulation of such situations, I will examine the following laws developed by the international policymaking bodies to support Member States in the tax enforcement:

- Directive on Administrative Cooperation in Tax Matters (hereinafter “DAC”): This directive requires EU Member States to exchange information on tax matters, such as information on cross-border payments and transactions.

  The DAC has been credited with helping to improve tax compliance and enforcement in the EU. By making it easier for tax authorities to share information, the DAC has made it more difficult for taxpayers to evade taxes.

  The DAC contributes to direct tax regulation and enforcement in a number of ways. First, it increases transparency by requiring member states to automatically exchange information on a wide range of tax-related matters. This increased transparency makes it more difficult for taxpayers to hide their income and assets from tax authorities. Second,

the DAC enhances cooperation between member states by requiring them to cooperate with each other in the exchange of information. This enhanced cooperation makes it easier for tax authorities to follow up on leads and investigate potential tax evasion cases. Third, the DAC allows tax authorities to receive information about potential tax evasion cases early on. This early detection gives tax authorities a better chance of preventing tax evasion from happening in the first place. Finally, the DAC gives tax authorities more tools to enforce tax laws. For example, the DAC allows tax authorities to request information from other member states without having to go through a lengthy legal process.

The DAC has been amended several times since it was first adopted in 2011, with the latest amendment, DAC 8, proposed in December 2022. DAC 8 expands the scope of information that must be exchanged, and it also introduces new requirements for the exchange of information on cryptoassets, which would require member states to exchange information on the ownership of assets, could be used to track the movement of virtual assets and to identify taxpayers who are not properly reporting their income. The amendment is of great relevance in the metaverse as the payments will be largely facilitated in cryptocurrencies. It is also likely to apply to the above-mentioned NFTs. The European Commission has proposed a directive that would require crypto-asset service providers (CASPs) to report information on certain transactions to local authorities. The proposal closely follows the provisions of the OECD's Crypto-Asset Reporting Framework (CARF), but also builds on the definitions used in the Markets in Crypto-Assets (MiCA) regulation.

The proposed directive would identify two types of entities that would be obliged to report information:

- Crypto-asset providers: any legal person or undertaking whose professional activity is the provision of one or more crypto-asset services to third parties.
- Crypto-asset operators: a provider of crypto-asset services other than a crypto-asset service provider. These operators do not fall within the scope of MiCA.

The directive would require RCASPs to report information on transactions involving reportable crypto-assets, which are defined as all crypto-assets that can be used for investment and payment purposes. This includes e-money, e-money tokens, and central bank digital currencies (CBDCs).

The information that RCASPs would need to report includes:

- The date of the transaction
- The type of transaction
- The value of the transaction
- The identity of the parties to the transaction
- The wallet addresses involved in the transaction

The directive would also require RCASPs to take action in cases where a crypto-asset user does not provide the required information after two reminders. In such a case, the RCASP would have to prevent the user from exchanging transactions.

The reporting arrangements would begin as of 1 January 2026. The Commission would establish practical arrangements to ensure that the exchange of reported information can be done in a standardised report. RCASPs would need to report by 31 January of the year following the year to which the information relates.

- Directive on Common Reporting Standards (hereinafter "CRS"): This directive is an international standard for the automatic exchange of financial account information between jurisdictions for tax purposes.

The CRS requires financial institutions to collect information about their account holders and report this information to the tax authorities in the jurisdiction where the account holder is resident. This applies to the taxpayers who are using virtual currencies or other virtual assets as well.

The CRS sets basis for the collection of information about financial transactions, including those that might take place in the metaverse. This information could then be used by tax authorities to identify and investigate potential tax evasion cases. For example, if a taxpayer is using a virtual currency to buy and sell goods or services in the metaverse, the CRS applies to collect information about these transactions. This information could then be used to determine whether the taxpayer is properly reporting their income and paying the appropriate taxes.

The use of the CRS for tax enforcement in the metaverse would likely require some adaptation. For example, it would be necessary to determine which financial institutions are covered by the CRS and what information they are required to report. Additionally, it would be necessary to develop methods for identifying and tracking financial transactions that take place in the metaverse.

- Directive on Anti-Tax Avoidance Measures (hereinafter "ATAD"): This directive introduces to prevent tax avoidance, such as the controlled foreign company (CFC) rules and the exit taxation rules.

The ATAD contains a number of measures, including:

  - A general anti-abuse rule (GAAR) that can be used to counteract aggressive tax planning
  - Rules on interest limitation that are designed to prevent multinational companies from shifting profits to low-tax jurisdictions
  - Rules on hybrid mismatches that are designed to prevent taxpayers from exploiting differences in tax treatment between different jurisdictions

The ATAD has been credited with helping to improve tax compliance and enforcement in the EU. By providing tax authorities with new tools to combat tax avoidance and evasion, the ATAD has made it more difficult for taxpayers to reduce their tax liability illegally.

The GAAR shall help to counteract aggressive tax planning schemes that are used to exploit the unique features of the metaverse. The rules on interest limitation and the hybrid mismatches provisions apply reinforcement of the prevention of the multinational companies from shifting profits to low-tax jurisdictions through the asset movements the metaverse.

To use ATAD to its full potential in the metaverse, it would be necessary to determine which activities in the metaverse are subject to taxation and how the ATAD should be applied to these activities. Additionally, it would be necessary to develop methods for identifying and tracking taxpayers and transactions in the metaverse.

- OECD Model Tax Convention (hereinafter "Convention"): This is a standard tax treaty that has been adopted by over 130 countries. It provides a framework for the taxation of cross-border income and transactions.

First, the Convention provides a framework for determining which country has the right to tax income and capital. This helps to prevent double taxation, which is when income or capital is taxed twice by different countries. Second, the Convention provides rules for avoiding tax avoidance and evasion. These rules include provisions on thin capitalization, transfer pricing, and treaty shopping. Third, the Convention provides for the exchange of

information between tax authorities. This helps to ensure that tax authorities have the information they need to enforce tax laws.

The Convention is also applicable to income and capital that is generated in the metaverse. For example, the Convention could be used to tax income from the sale of virtual goods or services, the transfer of virtual assets, and the use of virtual currency. It also provides a framework for prevention of the tax avoidance and evasion schemes that could be deployed in the metaverse, such as using the metaverse to set up shell companies or to engage in transfer pricing schemes.

- OECD BEPS Project (hereinafter "BEPS"): This is a comprehensive package of measures to address tax avoidance and evasion by multinational companies. The EU has adopted a number of measures based on the OECD BEPS recommendations.

The Project has developed 15 Actions, which provide countries with new tools to prevent tax avoidance and evasion.

It provides countries with a common understanding of the tax challenges posed by multinational enterprises to develop and implement effective tax laws and policies and provides tools to prevent base erosion and profit shifting. These tools include rules on transfer pricing, hybrid mismatches, and controlled foreign companies. It also promotes information exchange and enforcement coordination. BEPS supports regulation of taxation of income from the sale of virtual goods or services, the transfer of virtual assets, and the use of virtual currency.

Given the Member States' sovereignty in the matter of direct taxation, these laws are supportive to better coordination and enforcement in cross-border cases, which is a prevalent characteristic in tax evasion.

4. Conclusions

As we have examined the nature of taxable transactions in the metaverse, we saw that they are largely perceived similarly to those already covered by the existing laws. It is evident that differences emerge, notably in the question of real estate vs. virtual lands. Many national jurisdiction haven't legally addressed the matter of some crypto-assets that will be commonly traded in the metaverse, such the NFTs.

We have also looked into the opportunities that transition to the virtual worlds bring for tax administration. It can be concluded that it will be easier to monitor tax compliance in virtual environments and detect any non-compliant behavior in real time due to the real-time data processing capabilities of the applied technologies, namely blockchain. However, to put such supervision into practice, it is necessary to develop harmonized definitions and interoperable supervisory systems at the global level. The successful implementation of blockchain technology for tax enforcement requires collaboration between governments, tax authorities, international organizations, and technology providers. International standardization of tax-related data and formats is imperative to ensure consistent tax monitoring and reporting across different blockchain networks. The decentralized nature of blockchain technology can cause proliferation of multiple networks, each with its own protocols and data formats. Without standardization, tax authorities face challenges in accessing and interpreting taxpayer data from diverse blockchain platforms. However, by adopting standardized tax reporting templates and protocols, seamless data exchange between blockchain platforms and tax authorities becomes possible. With standardized tax reporting practices, tax authorities gain access to a uniform set of guidelines and reporting templates that all blockchain networks can adhere to. This consistency ensures that tax data is structured in a standardized manner, making it easier for tax authorities to access, understand, and cross-reference information across different blockchain networks. Such streamlined data collection processes reduce the risk of errors or discrepancies that might arise from varying data formats, allowing tax authorities to obtain accurate and comprehensive taxpayer information.

Finally, the top-line analysis of the existing EU laws and OECD policy guidelines implies presence of an applicable framework sufficiently anchored in the legal systems, allowing them to be effectively transposed into the national laws that do or will regulate new types of transactions. Nevertheless, as the example of the NFT taxation regulation unveils, for instance, the national states' sovereignty over direct taxation regulation often causes fragmentation, eventually leading to inefficiencies in tax enforcement. The hypothesis stated at the beginning of this paper – that the existing EU tax law is sufficient to address tax evasion in the metaverse, as it provides comprehensive provisions that can be effectively applied to virtual transactions, ensuring fair taxation, compliance, and enforcement within this virtual environment, is confirmed only partially. As it is explained in the case of the compliance supervision through blockchain, a set of international standards applied globally, yet allowing for a flexibility capable of responding to the speedy technological advancements is a precondition for efficient tax enforcement in the metaverse.

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