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Background and Acknowledgements

About the Committee

The United Nations Committee of Experts on International Cooperation in Tax Matters (the "Committee") comprises twenty-five members appointed by the Secretary-General, after notifying the Economic and Social Council, to serve in their personal capacity for a four-year term. Selected for their expertise in tax policy and administration, the members reflect diverse geographical regions and tax systems. The Committee is globally recognized for its normative and policy-shaping work and for the practical guidance it provides in tax policy and administration.

Committee mission

The Committee develops tools and resources for governments, tax administrators and taxpayers to help strengthen tax systems and mobilize financing for sustainable development, as well as strengthen international tax cooperation. The work aims to prevent double taxation and non-taxation while helping countries broaden their tax base, strengthen administration and combat tax evasion and avoidance. The Committee places special emphasis on addressing the needs of least developed countries, small island developing States and landlocked developing countries.

Committee working methods

The Committee meets twice annually—in spring (New York) and fall (Geneva). Between these sessions, Subcommittees work on specific topics under the Committee's oversight. These Subcommittees, whose participants also serve in their personal capacity, prepare proposals and draft guidance for review and approval by the Committee. This collaborative approach ensures thorough, multi-disciplinary and multi-stakeholder examination of complex tax issues, while maintaining the Committee's ultimate responsibility for all published guidance.

The taxation of crypto assets and the Sustainable Development Goals

At its Twenty-sixth Session in 2023, the Committee's 2021–2025 membership decided to establish, for the first time, an Ad Hoc Group on the Taxation of Cryptoassets. This initiative aimed to develop a *United Nations Toolkit for the Evaluation of Crypto Tax Risks* to support countries in identifying and assessing risks arising from cryptoassets in their domestic tax system. The work on the taxation of cryptoassets supports countries' efforts to achieve the Sustainable Development Goals (SDGs) by aiding countries in safeguarding tax revenues and, in light of rising adoption rates of cryptoassets, future-proofing their tax systems.

The Ad Hoc Group comprises a number of Committee members, officials from tax administrations and policymakers with wide and varied experiences related to the taxation of cryptoassets, as well as people from academia.

This publication

The *United Nations Toolkit for the Evaluation of Crypto Tax Risks* provides a practical, structured framework for the identification and assessment of crypto tax risks, combining a questionnaire with an explanatory commentary to help users apply it effectively. The UN Tax Committee reviewed, refined and approved this guidance during its Twenty-ninth and Thirtieth Sessions in October 2024 and March 2025. It provides countries with a tool to help safeguard tax revenues and strengthen their capacity to address emerging challenges, contributing to domestic resource mobilization efforts and the achievement of the SDGs.

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Disclaimer

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Snapshot

What are cryptoassets?

The term "cryptoassets" is generally used to refer to digital financial assets which are based on distributed ledger technology. Cryptoassets allow trust-free interactions between trading parties at a high speed without the use of the traditional banking system. Cryptocurrencies, a sub-category of cryptoassets, are cryptographically-secured digital representations of value that can be transferred, stored or traded electronically. The most known examples are bitcoin or Ethereum.

As of April 2025, the market capitalization of cryptocurrencies stands at about US$2.8 trillion. An estimated 425 million people around the world hold some form of cryptocurrency.

More detailed information on cryptoassets and the underlying technology can be found in the appendix.

Why did the UN Tax Committee develop this toolkit?

Cryptoassets can pose significant risks to tax systems. These risks have the potential to erode countries' tax bases unless governments take steps to adapt their tax systems to take cryptoassets into consideration.

This issue is exacerbated by the presence of limited tax reporting and information gathering systems and mechanisms, in contrast to the pseudonymity, i.e., the record of cryptoasset transactions is available in the public domain, but it is not possible to identify the (legal) persons behind the "wallets" (see appendix II.b.). This inherently poses the risk of tax evasion, both premeditated and incidental. The toolkit looks at crypto reporting and tax crimes as Risk 1.

The volatile nature of cryptoassets can very easily lead to the incurrence of losses by a whole range of investors and businesses. Without proper safeguards to "ring-fence" these crypto losses, taxpayers may use them to offset income from other sources, eroding the tax base. The cost to the tax system may be felt in the forgone revenue. The toolkit looks a crypto losses and deduction risks as Risk 2.

In many situations, transactions involving cryptoassets that are designed to be functionally equivalent to their traditional counterparts will also attract the same tax treatment. In such cases, a government which does not tax cryptoassets and transactions will risk losing tax revenue from traditional transactions

that have been forgone as a result of the adoption of crypto transactions. The use of cryptoassets may also create an incentive for tax arbitrage. The toolkit looks at crypto functional substitutes risks as Risk 3.

An overview of the crypto tax risks that this toolkit seeks to address can be found in section 2.2 (Map of Crypto Tax Risks). Further information on the challenges which digital assets pose for tax systems can be found here.

How should the toolkit be used and who is it addressed to?

This toolkit seeks to provide a practical, structured framework for the identification and assessment of crypto tax risks. It is meant to aid its user in identifying tax risks from cryptoassets through the use of a questionnaire. Context is provided through a commentary that provides further insights and background information to complement the user's existing knowledge and expertise and to aid in accurately identifying the crypto tax risks facing the tax system under review.

The toolkit can be used by anybody seeking to explore the risks that a particular tax system is facing. In practice, this could be policymakers situated in ministries of finance as well as those administering taxes. In the toolkit, reference is made to "users" of this toolkit and is meant to encompass those using the toolkit. The use of the toolkit requires some knowledge of the respective domestic tax system under analysis.

There is no need to read and work through the toolkit as a whole, unless desired. Users that are pressed for time or want to focus on a particular (sub-) risk may consult the Map of Crypto Tax Risk and focus on the desired parts of the toolkit. In this sense, the toolkit can be used as a reference tool and be consulted as needed.

Further information is contained in section 2 (Guide on how to use this toolkit). In particular, section 2.3 contains a worked example to provide insights into the approach and structure of the toolkit.

1. Introduction

As of April 2025, the global cryptocurrency market capitalization stands at about US$2.8 trillion.[1] An estimated 425 million people around the world hold some form of cryptoasset.[2] The size of the global cryptocurrency market and scale of adoption have made it important for countries to actively assess how their tax systems will respond to crypto activities by taxpayers. Nonetheless, most tax laws and systems were designed without cryptoassets[3] and transactions in mind, raising the possibility of "crypto tax risks" that may result in the erosion of the tax base. This issue is exacerbated by limited tax reporting and information gathering systems and mechanisms, if any are in place, in contrast to the pseudonymity which prominently characterizes the crypto market.

This toolkit seeks to provide a practical, structured framework for the identification and assessment of crypto tax risks. It has three main parts. Firstly, an introduction to the toolkit and how it should be used. Secondly, a series of questionnaires to complete. Thirdly, a commentary to provide additional context and details on each part of the toolkit and its application. As users go through the questionnaires, they can rely on the commentary to complement their existing knowledge and expertise to accurately identify the crypto tax risks facing their domestic tax systems.

Those interested in a more detailed analysis and discussion of crypto tax risks are encouraged to consult the *Report on the Challenges which Digital Assets Pose for Tax Systems with a Special Focus on Developing Countries* which can be found here.

While this toolkit is recommended for all countries, those which exhibit one or more of the following characteristics may especially consider using it: 1) countries with a high ranking on the Chainalysis Global Crypto Adoption Index, 2) countries with a high percentage of residents using the internet,[4] 3) countries with a less developed traditional banking sector, 4) countries with economic instability as mirrored in high inflation and /or volatile exchange rates and 5) countries with less developed crypto regulations and/or resources for enforcement. These factors make it more likely for a country to have higher rates of crypto adoption.

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1 Forbes, "Cryptocurrency prices today by market cap", Crypto prices, available at https://www.forbes.com/digital-assets/crypto-prices/ (accessed on 14 April 2025).

2 Henley & Partners, "The Crypto Wealth Report" (accessed on 24 October 2024).

3 The term "cryptoassets" is generally used to refer to digital financial assets (also known as digital tokens) based on distributed ledger technology (see Jean Bacon and others, "Blockchain demystified: A technical and legal introduction to distributed and centralised ledgers", *Richmond Journal of Law and Technology*, vol. 25, No.1 (November 2018)).

4 World Bank Group, "Individuals using the Internet (percentage of population)", World telecommunication/ICT indicators database, International Telecommunication Union. Available at https://data.worldbank.org/indicator/IT.NET.USER.ZS (accessed on 24 October 2024).

The risks listed in this toolkit may have differing levels of relevance for users depending on the characteristics of their tax systems. A jurisdiction with a large number of taxpayers currently reporting their cryptoassets and transactions (and thus, being assessed on crypto income and attempting to deduct crypto losses) would find Risk 2.1: Losses and Risk 3: Crypto functional substitutes, risks to be highly relevant to their situation. Conversely, a jurisdiction which has banned the holding and transfer of cryptoassets may not find these risks as relevant but might instead focus on Risk 1.5: Taxation of illegal transactions.

Regardless of the state of crypto adoption in a jurisdiction, users may wish to ensure that Risk 2.1: Losses, is comprehensively analysed and safeguards are put in place to protect the tax base.

It is also important for jurisdictions to consider whether crypto reporting frameworks would be beneficial for them. Strong reporting and information exchange mechanisms can help users make further policy decisions on crypto taxation.

Additionally, it is crucial to note that different ministries and authorities within a country, such as central banks, ministries of finance and tax administrations, may be at different stages in their regulatory approach towards cryptoassets. This discrepancy can create challenges and, as such, the user of this toolkit should be aware of these differences.

Given the breadth of this toolkit and the desire to make it as accessible as possible for all users, there are several highly technical areas which will not be covered in detail, including the accounting treatment of cryptoassets and their implications for taxation, transfer pricing issues relating to cryptoassets[5] and the valuation of cryptoassets.[6] Users may wish to consult some of the reference materials mentioned should they wish to learn more about these areas.

While this toolkit is focused on risks to tax systems created by cryptoassets, the underlying blockchain technology, identity tokens to replace existing error-prone identification, and smart contracts can also be a source of technological innovation for tax administrations.[7]

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5 See Fabian A. Peters, Amanda Pletz and Mark L. Berenblut, "Transfer pricing considerations for intercompany cryptocurrency", in *Applying the Arm's Length Principle to Intra Group Financial Transactions: A Reference Guide,* Robert Danon and others, eds. (Wolters Kluwer, 2023); and Vincent Ooi and Ilka Ritter, "Crypto assets: What issues do they pose for transfer pricing?", in *Transfer Pricing Developments Around the World 2023*, Michael Lang and Raffaele Petruzzi, eds. (Wolters Kluwer, 2023).

6 See Internal Revenue Service (IRS) Virtual Currency Guidance Notice, 2014–21, 2014–16 IRB 938, available at the United States of America IRS website (https://www.irs.gov/). Also see the commentary on Risk 2.2: Donations, p. 63.

7 See Inter-American Center of Tax Administrations (CIAT), "Blockchain in tax administrations", 14 June 2021.

2. Guide on how to use this toolkit

2.1. Overview

As a starting point, a user of the toolkit should read the introduction to understand how the toolkit should be used and then read the worked example contained in section 2.3. The introduction gives background information on cryptoassets and provides initial instructions on how to use the toolkit. The worked example would then further illustrate how the toolkit should be used in practice.

Following this, the user should select the risk which they wish to analyse from the Map of Crypto Tax Risks and proceed to (1) read the corresponding section of the commentary to gain an understanding of the risk and then (2) complete the relevant questionnaire for that risk.

The questionnaires break the issues involved in that particular crypto tax risk into three separate steps. Firstly, identifying the relevant tax principles. Secondly, identifying any differences which arise if cryptoassets or transactions are involved. Thirdly, assessing whether there should be any difference in the tax treatment if cryptoassets or transactions are involved. Each of the three main steps will have a set of questions for the user to complete, the results of which should (together with the commentary) assess the level of risk faced by a tax system.

2.2. Map of Crypto Tax Risks

This toolkit identifies three main categories of crypto tax risks: 1) Crypto reporting and tax crime risks, 2) Crypto losses and deductions risks and 3) Crypto functional substitutes risks. These main categories are then further subdivided into specific tax risks, creating a Map of Crypto Tax Risks (the Map) which may practically be used to systematically identify these risks. The Map reflects extensive literature review to determine the areas identified by international organizations, academics, non-governmental organizations and industry as those most likely to raise uncertainties as to the proper tax position, raise opportunities for tax avoidance or arbitrage, or generally pose risks to the tax base.

The Map is not intended to be a comprehensive listing of all potentially applicable risks but a selection of those risks that are particularly detrimental to the tax base. The Map also focuses on domestic tax rather than international tax risks as the former are likely to produce the most pressing concerns.

The Map of Crypto Tax Risks is listed as follows:

1. Crypto reporting and tax crimes risks	2. Crypto losses and deductions risks
1.1. Direct reporting and returns 1.2. Intermediaries reporting 1.2.1. Centralized crypto exchanges 1.2.2. Decentralized crypto exchanges 1.2.3. Traditional intermediaries 1.3. Investigative powers 1.4. International exchange of information 1.5. Taxation of illegal transactions	2.1. Losses 2.1.1. Losses from investment or speculation (Non-business) 2.1.2. Losses from trading in cryptoassets 2.1.3. Losses from crypto dealings as part of a broader non-crypto business 2.2. Donations 2.2.1. Donations of payment tokens 2.2.2. Donations of non-payment tokens
3. Crypto functional substitutes risks	
3.1. Issues of source and situs 3.1.1. Determining source for decentralized transactions 3.1.2. Determining situs of decentralized assets 3.1.3. Decentralized autonomous organizations (DAO) 3.2. Financial markets and instruments 3.2.1. Equity instruments 3.2.2. Debt instruments 3.2.3. Hybrid instruments 3.2.4. Derivatives 3.2.5. Forex 3.2.6. Decentralized finance (DeFi) 3.2.7. Redeemable tokens 3.2.8. Non-redeemable asset-backed tokens 3.2.9. Stablecoins	3.3. Cryptocurrency as a medium of exchange 3.3.1. Exchange of cryptocurrency for fiat currency 3.3.2. Exchange of cryptocurrency for other cryptoassets 3.3.3. Exchange of cryptocurrency for goods and services 3.3.4. Payment of cryptocurrency as remuneration 3.4. Business using cryptoassets 3.4.1. Crypto used as vouchers 3.4.2. Crypto as a product component

2.3. Worked example: Losses from trading in cryptoassets

In the following, a worked example is meant to illustrate (1) how the toolkit should be used and (2) provide insights into the approach and structure of the toolkit.

2.3.1. Selecting the risk to be analysed

The process begins with the user going through the Map and identifying which particular risk they wish to analyse. The user may have a particular risk in mind as part of an existing policy agenda or simply go through the Map as part of a broader exercise of identifying and managing crypto tax risks. This worked example covers

"losses from trading in cryptoassets", which is a sub-risk of the broader category of "crypto losses and deductions risks".

2.3.2. Reading the background provided by the commentary

The user will be asked to consult the relevant part of the commentary related to this tax risk. For this particular sub-risk, the commentary would explain that the crypto markets can display considerable volatility, posing the risk of large losses being generated in a short period of time. The key risk to the tax base here is that of the losses being deducted against income from other profitable sources, reducing the net amount of revenue which can be collected from these sources and eroding the tax base.

Apart from the mere fact that it may not be desirable for such large amounts of losses to be deductible in the tax system, there are two other additional situations where it may be particularly objectionable to allow such crypto losses to be deducted. Firstly, where the crypto losses are deducted against other sources of income that are not related to crypto (or are insufficiently connected). Secondly, where the crypto losses are shifted around in a manner which a tax authority may consider to be distortionary. This may be where the losses are "carried back" (potentially offset against income generated even before any crypto activities took place), "carried forward" (potentially offset against income generated long after any crypto activities have ceased) or shifted to other domestic companies (through a process such as group or consortium relief).

2.3.3. Completing the questionnaire

After the user has read the commentary, they would be asked to go through the questionnaire, which breaks that particular crypto tax risk into three separate steps. Firstly, identifying the relevant tax principles. Secondly, identifying any differences which arise if cryptoassets or transactions are involved. Thirdly, assessing whether there should be any difference in the tax treatment if cryptoassets or transactions are involved. Each of the three main steps will have relevant questions for the user to complete, the results of which should (together with the commentary) assess the level of risk faced by a tax system.

Step 1: Identifying the relevant tax principles

Issue A: Does the existing tax system distinguish between different kinds of losses?

Q1.	Does the existing tax system distinguish between a revenue (ordinary) and a capital loss? If so, how would this affect the deductibility of losses?
Q2.	Does the existing tax system distinguish between losses by source of income? If so, how would this affect the deductibility of losses?

The commentary would state that while many tax systems will distinguish between losses incurred from the carrying on of a trade or business and other general losses, there will be other tax systems which do not draw such a distinction. The following (or a hybrid of) categories are common: 1) strict source-by-source matching of each loss with income from the same source; 2) general matching of losses to income of the

same general type (most prominent under a schedular system); 3) a general matching of losses to income of the same general type, but with the exception of certain types of losses such as those from a trade or business, which can be set off against all types of income; 4) no requirements of matching of losses to income, restricted only in that capital losses may only be set off against capital gains and vice versa; 5) no requirements of matching losses to gains at all (which would lead to unconditional deductibility and should be very rare).

The user is tasked with looking at the various categories listed in the commentary and identifying which one their existing tax system falls under. The more generous the rules for the deduction of losses are in a tax system, the greater the crypto tax risks.

Sample answer:

A.	The existing tax system is a schedular system which distinguishes between business revenue and capital losses. The latter cannot be deducted against business income. It also generally requires the matching of losses by source of income. Losses from one source generally cannot be deducted from income from another source. The exception is that losses from a trade or business can be deducted against income from other sources.

Issue B: What are the tests for distinguishing between different kinds of losses?

Q1.	What tests do the existing tax system apply to determine if there is a trade or business?
Q3.	What are the tax implications of a finding that there is a trade or business?

The question of what legal test a tax system applies to determine if there is a trade or business and how losses are attributed is likely to be a familiar question. The commentary would highlight a range of commonly used tests. For example, the badges of trade test is commonly used to determine if a trade is being carried on and would be explained in the commentary. The test for a business might be whether there are activities which are commercially undertaken habitually and systematically. A user will be able to select from a range of common tests and tax features and match their system to a tax system it is most similar to.

Sample answer:

A.	The existing tax system applies a variety of tests to determine if a loss relates to business revenue or to capital in nature. There is a list of factors that may be indicative, such as whether the asset disposed of was a personal use asset or whether the intention of the taxpayer was to make a profit (for example, the length of the holding period).

	The existing tax system applies a very strict process of source matching, with only dealings in the same kind of asset being considered to be related. The exception is where a trade or business can be established. To establish whether there is a trade, the badges of trade test will be applied. To establish whether there is a business, the question is whether there are activities which are commercially undertaken habitually and systematically.

Step 2: Identifying any differences which arise if cryptoassets or transactions are involved

Issue: Do the tests for distinguishing between different kinds of losses differ if cryptoassets or transactions are involved?

Q2.	Does the test to determine if there is a trade or business differ if cryptoassets or transactions are involved?

The commentary would explain that the fact that a cryptoasset is involved will affect the application of the badges of trade test in the following ways: firstly, cryptoassets are not generally of a kind considered to be used for investment, but rather for trading. Secondly, the period of ownership to constitute a trade will generally be shorter. Thirdly, the frequency of trading might be greater for cryptoassets. Fourthly, dealing with cryptoassets with volatile values may more readily constitute gambling and thus, not a trade.

Sample answer:

A.	Where cryptoassets are dealt with, the rules for determining if losses are from the same source are similar to those for shares. Several indicia of the badges of trade will tend to present differently where cryptoassets are involved. The net result is that dealings in cryptoassets will generally not constitute a trade or business.

Step 3: Assessing whether there should be any difference in the tax treatment if cryptoassets or transactions are involved

Q4.	Are there any tax policy reasons for treating crypto-related trades or businesses differently from other, traditional trades or businesses?

The commentary will explain that it may be beneficial to treat cryptoassets and transactions differently from their traditional counterparts for tax purposes due to certain policy reasons. For example, the deductibility of crypto losses may be more restricted due to the high volatility of cryptoasset values.

Sample answer:

A.	The fact that dealings with cryptoassets are less likely to be considered capable of establishing a trade or business is in line with the policy decision to manage the risks of large crypto losses being deducted against other sources of income. In fact, for the most part, crypto losses are treated in a similar way to non-crypto losses. This does not reflect the higher risks of crypto losses to the tax system and further restrictions should be placed on the deductibility of crypto losses.

Through this process, the toolkit will help users identify potential crypto tax risks and the extents to which they may pose a problem for the existing tax system. As the toolkit is drafted in broad terms, it relies heavily on the existing expertise of the user in determining what the tax position would be under their domestic tax systems. This process should assist in determining whether a particular crypto tax risk is one which warrants management and/or mitigation. The role of the toolkit is not to prescribe, but to provide a framework for analysis and also describe policy options for consideration.

3. Questionnaires

Each crypto tax risk (as listed in the Map in 2.2) has its own separate questionnaire. Users can choose to go through all of the questionnaires in a single exercise or complete particular questionnaires for the individual risks that they wish to assess. Some sub-risks share similar issues and thus, there may be preliminary questions that apply to a group of sub-risks. Users completing the questionnaires for individual risks may be guided to answer some of these preliminary questions before going on to complete the particular questionnaire for their selected risks.

Users may read the questionnaires first to get an overview of the questions but should then read the relevant commentaries before starting the questionnaires. The commentaries are meant to be referenced constantly when completing the questionnaires, in particular at three points: 1) before starting the questionnaires (to understand the background of the sub-risk in question); 2) before answering each individual question (to understand the rationale for that question and for technical details); and 3) after answering each individual question.

Risk 1: Crypto reporting and tax crimes risks

Crypto reporting questionnaire **(Preliminary questions for Risks 1.1–1.4)**	
Definition	
Q1.	Does the existing tax system provide a definition of "cryptoassets" for tax purposes?
Q2.	If so, how does the existing tax system define cryptoassets for tax purposes? Does it refer to any international standard?
Standardized framework	
Q3.	Does the existing tax system provide a standardized framework for the information on cryptoassets and transactions to be collected and reported?
Q4.	If not, would implementing another standard be feasible?
Processing of information	
Q5.	Is there a mechanism to reconcile the acquired information with information from other sources (for example, the existing returns filed by taxpayers, information received from other jurisdictions, or other government agencies)?

Risk 1.1: Direct reporting and returns

Refer to the crypto reporting questionnaire for the first five questions.	
Filing the tax return	
Q1.	What percentage of individual taxpayers and companies within the current jurisdiction file tax returns each tax year, respectively?
Q2.	Does the existing tax system specifically require taxpayers to provide information on crypto income, assets and transactions in their tax returns? If so, what kind of information is required?
Q3.	Would the taxpayers be required to provide information relating to the most recent basis period (generally, the last tax year) only or the past few basis periods?
Q4.	Does the existing tax system require taxpayers to provide information in their tax returns on common crypto activities relating to them (such as mining, forging, airdrops and forks)?
Voluntary reporting	
Q5.	If the existing tax system does not require crypto information to be provided when filing tax returns, does it have a mechanism that allows taxpayers to provide such information voluntarily?
Whistle-blowing mechanisms	
Q6.	Does the existing tax system have a formal whistle-blowing mechanism that could also apply to reporting cryptoasset-related information?

Risk 1.2: Intermediaries reporting

Intermediaries reporting questionnaire (Preliminary questions for Risks 1.2.1–1.2.3)	
Standardized framework	
Q1.	Is the jurisdiction likely to have a significant proportion of its residents using the services of intermediaries?
Q2.	Are most of the intermediaries based within the jurisdiction or in other jurisdictions?
Q3.	Does the existing tax system have a standardized framework for intermediaries reporting?
Q4.	If the jurisdiction has decided to proceed with an international exchange of crypto information mechanism (such as the Crypto-Asset Reporting Framework (CARF)), has the domestic legislation been amended to require intermediaries to provide crypto information?

Risk 1.2.1: Centralized crypto exchanges

Refer to the crypto reporting questionnaire for the first five questions. Refer to the intermediaries reporting questionnaire for the next four questions.	
Q1.	Does the existing tax system have a definition of a "centralized crypto exchange"?
Q2.	If so, what information does a centralized crypto exchange need to report?

Risk 1.2.2: Decentralized crypto exchanges

Refer to the crypto reporting questionnaire for the first five questions. Refer to the intermediaries reporting questionnaire for the next four questions.	
Q1.	Does the jurisdiction have a definition of a "decentralized crypto exchange"?
Q2.	If so, what information does a decentralized crypto exchange need to report?

Risk 1.2.3: Traditional intermediaries

Refer to the crypto reporting questionnaire for the first five questions. Refer to the intermediaries reporting questionnaire for the next four questions.	
Q1.	Does the existing tax system have any mechanisms in place to collect information from traditional intermediaries (including those applying international standards such as the Common Reporting Standard (CRS))?
Q2.	If so, are the existing mechanisms effective in collecting taxpayer information?
Q3.	Do the current reporting obligations of traditional intermediaries assist the authorities in obtaining information regarding cryptoasset transactions?

Risk 1.3: Investigative powers

Refer to the crypto reporting questionnaire for the first five questions.	
Documents and information from taxpayers	
Q1.	Do tax authorities currently possess any powers to demand documents and ask for additional information from taxpayers (during the processing of tax returns and during an audit)?
Document and information from third parties	
Q2.	Do tax authorities currently possess any powers to demand documents and ask for additional information from third parties (e.g., banks)?

Compelling attendance in investigations	
Q3.	Do tax authorities currently possess any powers to compel the attendance of any taxpayer to be interviewed in an investigation or for a court hearing?
Raids and seizing equipment and documents	
Q4.	Do tax authorities currently possess any powers to conduct raids?
Q5.	Do tax authorities currently possess any powers (and technical knowledge) to enter taxpayers' premises and seize equipment (e.g., hard drives)?

Risk 1.4: International exchange of information

For domestic information reporting and collection, refer to the questionnaires for Risks 1.1–1.3. Refer to the crypto reporting questionnaire for the first five questions.	
Q1.	Has the jurisdiction ratified any international instruments to facilitate the international exchange of information? Or does the jurisdiction rely on double taxation treaties?
Q2.	Has the jurisdiction passed new legislation or is there a need to pass additional legislation to implement the exchange of information?
Q3.	Has the jurisdiction ratified CARF?

Risk 1.5: Taxation of illegal transactions

Legal nature of cryptoassets	
Q1.	Is the mere holding of cryptoassets prohibited in the jurisdiction?
Q2.	Are there any restrictions pertaining to cryptoassets in the jurisdiction?
Q3.	Are transactions of cryptoassets prohibited unless conducted through authorized crypto exchanges?
Q4.	Are overseas transactions of cryptoassets prohibited?
Tax rules relating to illegal transactions	
Q5.	If cryptoassets or transactions are illegal, would any income generated from them be taxable in the jurisdiction?
Q6.	If so, would the existing tax system allow taxpayers to offset or deduct properly incurred expenses?

Risk 2: Crypto losses and deductions risks

Risk 2.1: Losses

Losses questionnaire **(Preliminary questions for Risks 2.1.1–2.1.3)**	
General features of the existing tax system	
Q1.	Does the existing tax system distinguish between a revenue (ordinary) and a capital loss? If so, how would this affect the deductibility of losses?
Q2.	Does the existing tax system distinguish between losses by source of income? If so, how would this affect the deductibility of losses?
General safeguards	
Q3.	Does the existing tax system have any mechanisms for the carrying forward or carrying back of losses? If so, are there any restrictions on these mechanisms?
Q4.	Does the existing tax system have any mechanisms for the group relief of losses? If so, are there any restrictions on these mechanisms?
Q5.	Are the safeguards of the existing tax system sufficient to manage the risk of crypto losses?

Risk 2.1.1: Losses from investment or speculation (non-business)

Refer to the losses questionnaire for the first five questions.	
Q1.	If the existing tax system does distinguish between a revenue (ordinary) or capital loss, what tests are applied to make this determination?
Q2.	If the existing tax system does distinguish between losses by source of income, what tests are applied to determine if losses are from the same source?
Q3.	Is the existing tax system likely to allow for crypto losses from investment or speculation to be generally deducted against income from other (non-crypto) sources?

Risk 2.1.2: Losses from trading in cryptoassets

Refer to the losses questionnaire for the first five questions.	
Q1.	What tests do the existing tax system apply to determine if there is a trade or business?
Q2.	Does the test to determine if there is a trade or business differ if cryptoassets or transactions are involved?
Q3.	What are the tax implications of a finding that there is a trade or business?
Q4.	Are there any tax policy reasons for treating crypto-related trades or businesses differently from other, traditional trades or businesses?

Risk 2.1.3: Losses from crypto dealings as part of a broader non-crypto business

Refer to the losses questionnaire for the first five questions.	
Q1.	Does the existing tax system prohibit the deduction of losses simply because they are linked to cryptoassets in any way?
Q2.	Should the tax system prohibit the deduction of crypto losses against income unless they have a sufficient connection to the source of income?

Risk 2.2: Donations

Donations questionnaire (Preliminary questions for Risks 2.2.1–2.2.2)	
Donations and tax deductions	
Q1.	Does the tax system allow for tax deductions for donations in kind? If so, are donations of cryptoassets tax deductible?
Valuation	
Q2.	Is there a framework or guidelines to value cryptoassets, and is it based on fair market value or another method?
Deemed realization rule	
Q3.	Is there a deemed realization rule (assets are deemed to have been sold at a market value)?

Risk 2.2.1: Donations of payment tokens

Refer to the donations questionnaire for the first three questions.	
Policy considerations	
Q1.	Does the existing tax system distinguish between donations of payment tokens and non-payment tokens?
Q2.	Does the existing tax system distinguish between donations of less frequently traded payment tokens and actively traded payment tokens?

Risk 2.2.2: Donations of non-payment tokens

Refer to the donations questionnaire for the first three questions.	
Policy considerations	
Q1.	Are donations of non-payment tokens tax deductible in the jurisdiction?

Risk 3: Crypto functional substitutes risks

Risk 3.1: Issues of source and situs

Source and situs questionnaire **(Preliminary questions for Risks 3.1.1–3.1.3)**	
General features of the existing tax system	
Q1.	How do source rules apply to transactions involving assets without physical presence or physical location? Are there specific tax rules addressing these issues?
Q2.	Does the current tax system consider the situs of assets to determine the presence of taxable income or capital gains? If so, does this consideration extend to assets without a specific geographic location?
Q3.	Does the current tax system establish different treatments for income generated abroad or within the jurisdiction?

Risk 3.1.1: Determining source for decentralized transactions

Refer to the source and situs questionnaire for the first three questions.	
Q1.	Are there specific tax rules to determine the source of decentralized transactions involving cryptoassets?
Q2.	In the absence of specific legislation, can existing source rules for transactions involving assets without physical presence be effectively applied to transactions involving cryptoassets?

Risk 3.1.2: Determining situs of decentralized assets

Refer to the source and situs questionnaire for the first three questions.	
Q1.	Are there specific tax rules to determine the situs of decentralized cryptoassets?
Q2.	In the absence of specific legislation, can existing situs rules applicable to assets without physical presence apply to cryptoassets?

Risk 3.1.3: Decentralized autonomous organizations

Refer to the source and situs questionnaire for the first three questions.	
Q1.	Are decentralized autonomous organizations (DAO) regulated under the current tax legal framework? If so, what is their legal status? Do they have legal personality?
Q2.	In the absence of specific legislation, could a DAO be categorized under an existing legal structure within the current legal framework? If so, how would its tax residency be determined?

Q3.	How are transactions with cryptoassets in a DAO recognized and regulated under the current tax system? In the absence of specific law, how is the source of the income derived from such transactions determined?

Risk 3.2: Financial markets and instruments

Financial questionnaire (Preliminary questions for Risks 3.2.1–3.2.9)	
Q1.	How are financial instruments regulated under the current tax system?
Q2.	Does the current tax legislation contain specific definitions for financial instruments? How are these established (e.g., through a general definition, a closed list of instruments, or an open list)?
Q3.	Are financial market instruments covered by the existing tax system? If so, are cryptoassets in their scope?
Q4.	Are there specific rules in the tax system to prevent manipulation through financial instruments or markets? Are reporting and documentation requirements in place (e.g., tax returns, informational returns, financial institution reporting)?

Risk 3.2.1: Equity instruments

Refer to the financial questionnaire for the first four questions.	
Q1.	What are the current criteria to define an equity instrument for tax purposes? Are cryptoassets functioning as equity instruments explicitly included or excluded? Could these meet existing definitions?
Q2.	In case there is no specific regulation, would gains derived from the sale of cryptoassets functioning as equity instruments be taxed under current legislation?
Q3.	In the absence of specific regulation, would distributions similar to dividends derived from cryptoassets functioning as equity instruments be taxed under current legislation?

Risk 3.2.2: Debt instruments

Refer to the financial questionnaire for the first four questions.	
Q1.	How does the current tax legislation define a "debt instrument", and does this definition encompass cryptoassets?
Q2.	In case cryptoassets are not explicitly considered debt instruments, are interest payments on loans involving cryptoassets subject to the same tax rules as loans of fiat currency or securities? How would this affect the deductibility of interest payments?

Q3.	Are there specific anti-avoidance rules that could prevent the manipulation of taxable income through the use of loans involving cryptoassets?

Risk 3.2.3: Hybrid instruments

Refer to the financial questionnaire for the first four questions.	
Q1.	Does the current tax legislation explicitly define or recognize hybrid instruments that have characteristics of both equity and debt? Are cryptoassets that combine characteristics of both equity and debt explicitly included or excluded? Could these meet these definitions?
Q2.	How does the tax system classify income generated from hybrid instruments? Are there specific anti-abuse measures?
Q3.	How does the current tax framework address the valuation and reporting requirements for hybrid instruments? Are these requirements adequate for cryptoassets with hybrid features?

Risk 3.2.4: Derivatives

Refer to the financial questionnaire for the first four questions.	
Q1.	Does the current tax legislation explicitly define and regulate derivatives? Could cryptoassets that function as derivatives meet these definitions?
Q2.	How does the current tax system classify and tax the income generated from derivatives? In the absence of specific legislation, could existing rules be applicable to income generated from derivatives involving cryptoassets, either as underlying assets or as the derivative itself?
Q3.	Are there anti-avoidance provisions in the current tax legislation that prevent the use of derivatives for tax planning purposes? Could these provisions be effectively applied to cryptoasset derivatives to prevent tax avoidance or abuse?

Risk 3.2.5: Forex

Refer to the financial questionnaire for the first four questions.	
Q1.	Is there a definition of "foreign currency" in tax legislation? Does this definition explicitly exclude cryptoassets, and if so, are there provisions for payment tokens intended to function as a medium of exchange?
Q2.	How is income from the trading of foreign currencies currently taxed? Do the rules applicable to the trading of cryptoassets that function as a medium of exchange produce similar tax outcomes?

Risk 3.2.6: Decentralized finance

Refer to the financial questionnaire for the first four questions.	
Q1.	Does the current tax legislation explicitly recognize or define decentralized finance (DeFi) activities? If so, how are transactions conducted on these platforms treated for tax purposes?
Q2.	If transactions involving cryptoassets in DeFi activities are not explicitly regulated, how does the current tax system treat income or gains generated from such activities?

Risk 3.2.7: Redeemable tokens

Refer to the financial questionnaire for the first four questions.	
Q1.	Does the current tax legislation explicitly address the treatment of redeemable tokens? If so, are they treated as equivalent to the underlying assets, or are they classified differently?
Q2.	In cases where redeemable tokens are not explicitly regulated, how would the tax system tax the income or gains generated from transactions involving these tokens?

Risk 3.2.8: Non-redeemable asset-backed tokens

Refer to the financial questionnaire for the first four questions.	
Q1.	Does the current tax legislation explicitly recognize non-redeemable asset-backed tokens? If so, how are income and gains derived from transactions with them treated, particularly in cases where they are only partially backed or backed by a diverse mix of underlying assets?
Q2.	In the absence of explicit regulation, how does the tax system currently treat income or gains from transactions involving non-redeemable asset-backed tokens?

Risk 3.2.9: Stablecoins

Refer to the financial questionnaire for the first four questions.	
Q1.	Does the current tax legislation explicitly address the treatment of stablecoins, particularly considering the different mechanisms used to maintain their peg? Are there specific provisions that differentiate between stablecoins backed by assets and those that maintain their peg through algorithms or financial engineering?
Q2.	In the absence of specific legislation, how does the tax system currently treat income or gains from the use of stablecoins, particularly in relation to their roles as a medium of exchange, a store of value, or in generating interest and rewards?

Risk 3.3: Cryptocurrency as a medium of exchange

Cryptocurrency exchange questionnaire (Preliminary questions for Risks 3.3.1–3.3.4)	
Q1.	Does the existing tax system recognize and define cryptocurrency as a medium of exchange? Are there anti-abuse measures specifically for cryptocurrency transactions?
Q2.	If there is no specific legislation for the use of cryptocurrencies as a medium of exchange, how does the tax system currently treat the exchange of non-cash assets for tax purposes? How are these transactions valued and taxed if applicable?
Q3.	How does the tax system ensure compliance and enforcement for transactions involving non-cash assets? What mechanisms are in place to track, report and audit these transactions?

Risk 3.3.1: Exchange of cryptocurrency for fiat currency

Refer to the cryptocurrency exchange questionnaire for the first three questions.	
Q1.	If cryptocurrencies are recognized as a medium of exchange, what tax implications arise from the exchange of cryptocurrencies for fiat currency?
Q2.	Is the exchange of cryptocurrency for fiat currency considered a taxable event under current tax legislation?

Risk 3.3.2: Exchange of cryptocurrency for other cryptoassets

Refer to the cryptocurrency exchange questionnaire for the first three questions.	
Q1.	Is the exchange of cryptocurrency for other cryptoassets expressly regulated for tax purposes? If so, what are the rules in place for the valuation of both cryptoassets involved? Are there specific anti-abuse measures included and have these measures been effective?
Q2.	In the absence of specific regulations, how does current tax legislation treat non-cash asset exchanges? Would these rules be comprehensive enough to encompass the exchange of cryptocurrencies for other cryptoassets and would they adequately address the valuation challenges inherent to such transactions?
Q3.	How does the current tax system mitigate risks of tax evasion and undervaluation in exchanges involving non-cash assets?

Risk 3.3.3: Exchange of cryptocurrency for goods and services

Refer to the cryptocurrency exchange questionnaire for the first three questions.	
Q1.	Is the exchange of cryptocurrency for goods and services specifically addressed in tax law or regulations, and if so, how are these transactions valued and taxed?
Q2.	In the absence of specific regulations, how does the tax system treat the use of non-cash assets as a means of payment for goods and services?
Q3.	What are the current reporting and documentation requirements for businesses when non-cash assets are received as payment?

Risk 3.3.4: Payment of cryptocurrency as remuneration

Refer to the cryptocurrency exchange questionnaire for the first three questions.	
Q1.	Is remuneration paid in cryptocurrency currently expressly regulated for tax purposes?
Q2.	In the absence of specific regulations, is remuneration paid in non-cash assets currently considered taxable income for the worker, and are they deductible for the employer? How is this non-cash remuneration valued?
Q3.	What impact does the payment of remuneration in non-cash assets have on social security contributions and other payroll-related taxes in the application of existing law?

Risk 3.4: Business using cryptoassets

Business using cryptoassets questionnaire (Preliminary questions for Risks 3.4.1–3.4.2)	
Q1.	What is the current treatment in tax legislation for pre-paid instruments, vouchers, or similar items that grant future access to goods or services?
Q2.	How does your jurisdiction typically determine the tax treatment for bundled products or services that combine different types of goods (e.g., physical and digital)?

Risk 3.4.1: Crypto used as vouchers

Refer to the business using cryptoassets questionnaire for the first two questions.	
Q1.	Does your jurisdiction's tax legislation specifically address the treatment of utility tokens when used as vouchers?
Q2.	In cases where there is no specific legislation, how does the treatment of traditional vouchers apply? Could these rules be applicable to utility tokens?

Risk 3.4.2: Crypto as a product component

Refer to the business using cryptoassets questionnaire for the first two questions.	
Q1.	Does the tax legislation specifically address the treatment of cryptoassets when they are bundled with non-crypto products or services?
Q2.	In the absence of specific legislation, how would cryptoassets be treated for tax purposes when they are bundled with non-crypto products or services under general tax legislation?

4. Commentaries

These commentaries aim to provide the users of the toolkit with the relevant background on the technical details of cryptoassets and transactions and the crypto tax risks. It should be read in conjunction with the questionnaires, with the user alternating between the two sections as appropriate. The commentaries are divided into two main parts: firstly, a section laying out the general background of the relevant risks. This section follows the statement of the crypto tax risks and is intended to provide the user with a broad overview of the issues and relevant technical knowledge. Secondly, each question in the questionnaires will be followed by a section explaining the rationale for that question and providing technical details.

Risk 1: Crypto reporting and tax crimes risks

The first risk has to do with the gathering, exchange and use of crypto tax information by governments, and other broad issues such as the underlying definitions and technology, as well as the challenge of dealing with illegal crypto activities. In many jurisdictions, the systems and mechanisms for tax reporting and information gathering, if they exist, are still basic and require further development, making it harder to effectively manage crypto taxation. The issue of ensuring that governments have adequate information on cryptoassets and transactions is a particularly important one because there are several features of crypto that make it difficult to gather accurate information on crypto activities and the relevant parties engaged in such activities. The main issue is one of pseudonymity, where it is generally possible to track which wallets are involved in crypto holdings and transactions, but considerably more difficult to identify the individuals or entities behind those wallets. It is only when a reasonably clear picture of the taxpayer's crypto and traditional asset holdings and transactions is available that a decision can be made whether to commence an audit and further investigation.[8] The commentaries on crypto reporting attempt to address the issue of how to tap existing and new mechanisms to maximize their information gathering, exchange and use capabilities.[9]

Crypto reporting questionnaire

(Preliminary questions for Risks 1.1–1.4)

8 See Vincent Ooi, "Report on the challenges which digital assets pose for tax systems with a special focus on developing countries," report prepared for the United Nations Committee of Experts on International Cooperation in Tax Matters, Twenty-sixth Session, commissioned by the International Tax and Development Cooperation Branch, Financing for Sustainable Development Office and United Nations Department of Social and Economic Affairs, 7 March 2023, section 2.5.2: Tax Evasion.

9 Ibid., section 2.5.1: Problems of Pseudonymity and Reporting and section A1.2.3: "Wallets" and the Issue of Pseudonymity.

Background and rationale

Given that Risks 1.1 – 1.4 all concern the broad issue of the gathering, exchange and use of crypto information, there is a common set of questions - the crypto reporting questionnaire - that should be answered when considering any of those risks. These questions set the background for examining more specific situations when considering the various crypto tax risks later.

Definition	
Q1.	Does the existing tax system provide a definition of "cryptoassets" for tax purposes?

Background and rationale

A basic prerequisite for the gathering, exchange and use of crypto information is a definition of what a "cryptoasset" is for tax purposes. With such a definition, laws providing for the gathering of crypto information can then be drafted and internal processes can be designed to handle such information.

Many jurisdictions will not currently have any express definition of cryptoassets in their tax laws. It is noted that a jurisdiction which has implemented or is in the process of implementing the CARF[10] (more information on the CARF can be found in appendix III) or a similar international exchange of crypto information standard into their domestic law would have a definition of cryptoassets in their tax system (see the commentary for the next question).

A definition of cryptoassets need not necessarily apply across all areas of tax law. It is possible, for example, for a certain definition to apply exclusively for the purposes of exchange of information, but not for other areas of tax law. This would be the case for a jurisdiction which has implemented an international exchange of crypto information standard but not made any other crypto tax amendments to its tax statutes.

As the area of crypto taxation is still developing, to prevent unintended consequences, most jurisdictions which do have a definition of cryptoassets currently only apply such a definition in the exchange of information context and do not have a general definition that would apply across the entirety of tax law in that jurisdiction. Such a definition would have effects on procedural matters (exchange of information) but not substantive tax law (i.e., not apply to affect the determination of tax liability).

Q2.	If so, how does the existing tax system define cryptoassets for tax purposes? Does it refer to any international standard?

10 Organisation for Economic Co-operation and Development (OECD), *International Standards for Automatic Exchange of Information in Tax Matters: Crypto-Asset Reporting Framework and 2023 Update to the Common Reporting Standard* (Paris, OECD Publishing, 2023).

Background and rationale

Building on the previous question, this question encourages the users to consider if a definition of cryptoassets would be helpful in tackling crypto tax risks. If a jurisdiction has a definition, the user should check their current definition against other international standards.

Some jurisdictions have introduced a definition of the term "cryptoassets", although there is no universal consensus on its definition at the moment. Guidance may be taken from the definitions offered by several leading international exchange of information initiatives. The Organisation for Economic Co-operation and Development's CARF defines cryptoassets as "a digital representation of value that relies on a cryptographically secured distributed ledger or a similar technology to validate and secure transactions."[11] The European Commission's Markets in Crypto-Assets Regulation (MiCA) defines them as "a digital representation of a value or of a right that is able to be transferred and stored electronically using distributed ledger technology or similar technology."[12]

For completeness, users may also wish to consider the Financial Action Taskforce's (FATF) definition of "virtual assets", as "a digital representation of value that can be digitally traded, or transferred, and can be used for payment or investment purposes."[13] This is a broader concept than cryptoassets and may be used if a jurisdiction wishes to widen the scope of the applicable tax laws.

Further information can be found in appendix I.

Standardized framework	
Q3.	Does the existing tax system provide a standardized framework for the information on cryptoassets and transactions to be collected and reported?

Background and rationale

Due to the potentially large amounts of data that may be collected and exchanged, it is important for the information to be standardized, so that it can be readily used for data analysis. This may allow the creation of systems that flag taxpayers for audits or further investigations. It is desirable to be able to match taxpayer data to the correct taxpayer identification number (TIN), allowing for the retrieval of all relevant information about a particular taxpayer when making administrative decisions. Other

11 Ibid., p. 22 section IV(A)(1).

12 Regulation (EU) 2023/1114 of the European Parliament and of the Council of 31 May 2023 on Markets in Crypto-Assets, and amending Regulations (EU) No 1093/2010 and (EU) No 1095/2010 and Directives 2013/36/EU and (EU) 2019/1937, Title I, Article 3. Also see the European Commission, Council Directive (EU) 2023/2226 of 17 October 2023 amending Directive 2011/16/EU on administrative cooperation in the field of taxation (Directive on Administrative Cooperation (DAC8)).

13 Financial Action Task Force (FATF), *Updated Guidance for a Risk-Based Approach to Virtual Assets and Virtual Asset Service Providers* (Paris, 2021), p. 109.

important data points include the wallets which are controlled by a taxpayer, total value of crypto holdings of a taxpayer, actual crypto holdings and various crypto transactions made.

Most countries will not yet have such a standardized framework. But given the increasingly widespread adoption of international exchange of crypto information mechanisms which do prescribe such a framework, it is possible that more countries will build their standardized framework based on these mechanisms.

Q4.	If not, would implementing another standard be feasible?

Background and rationale

There are several advantages to adopting a framework prescribed by one of the international exchange of crypto information mechanisms. Making use of the same framework would greatly facilitate the eventual sending of crypto information to other jurisdictions under the mechanism should the jurisdiction choose to ratify and implement it. There would be similar advantages when receiving crypto information from other jurisdictions. Adopting an existing framework would save a jurisdiction from having to come up with one from scratch. Jurisdictions may choose to build on the existing framework and add some data points.

International frameworks will often prescribe some key items of information to be reported. For example, under the CARF, these items include: 1) the taxpayer's jurisdiction of residence; 2) its TIN; 3) the full name of the relevant cryptoassets; 4) any acquisitions and disposals of the cryptoassets (whether exchanged for fiat currency or other cryptoassets); 5) retail payment transactions; and 6) other transfers of cryptoassets. The fair market value of the cryptoassets must be reported (net of any transaction fees).[14] An extensible markup language (XML) schema is currently being developed to facilitate the reporting and exchange of crypto information.[15] Adoption of an international standard may establish good starting points for information collection. Jurisdictions which wish to go further can evaluate requiring the reporting of any wallet addresses controlled by the taxpayer. However, it should be noted that adopting an international standard comes with challenges, especially with respect to administrability and the technology needed. Developing countries will need to analyse their tax policy options and priorities in respect of this undertaking.

Processing of information	
Q5.	Is there a mechanism to reconcile the acquired information with information from other sources (for example, the existing returns filed by taxpayers, information received from other jurisdictions, or other government agencies)?

14 OECD, *Crypto-Asset Reporting Framework* (see footnote 10), pp. 31–35. Issues of valuation are addressed in pp. 36–38.

15 Ibid., p. 3.

Background and rationale

As information can come from a variety of sources, such as tax returns filed by taxpayers, information received from other jurisdictions or other government agencies, it is highly recommended that the information be standardized, so that it can easily be analysed (whether by tax officers or with the aid of an automated system). Depending on domestic legislation, it may be possible to obtain relevant information from other governmental agencies such as financial regulators and/or central banks that may collect it. However, it is necessary to check the domestic legislation to ensure that information from other governmental agencies may be legally transferred to the tax authority.

It is recommended that, regardless of the source of the information reported, it must always include a TIN, to ensure that it is associated with the correct taxpayer.

A more sophisticated reporting system could be one which has procedures in place to flag potential issues of interest for further analysis and investigation. Such procedures could be automated or manually done by tax officers. Examples include cases where there is a large volume of crypto transactions, where information from the various sources do not tally, or where transactions are made with suspicious counterparties.

Risk 1.1: Direct reporting and returns

While collecting information from intermediaries is a good way of ensuring that taxpayers have made full and frank disclosure in their tax returns, in many jurisdictions, particularly for taxpayers who are entities, the primary way of gathering taxpayer information is through direct reporting by taxpayers when they file their returns. The importance of this primary mechanism is enhanced by the fact that with cryptoassets and transactions, quite often, it may not be technically necessary to go through any intermediary at all to access the crypto market given its decentralized nature. Tokens can be freely transferred between individuals (peer-to-peer) without having to go through any intermediaries. As such, there could be some wallets which were never registered with intermediaries, making it impossible to identify their owners.[16] Therefore, it may not be sufficient to gather information on taxpayers and transactions from intermediaries alone. There also need to be systems in place that can help taxpayers to effectively and accurately make reports and returns to the tax authorities by themselves.

Refer to the crypto reporting questionnaire for the first five questions.

Please complete the five questions listed in the crypto reporting questionnaire above before proceeding with the following questions, as they are crucial for setting the necessary context for discussing direct reporting and returns.

16 Also see Ooi, "Report on the challenges which digital assets pose for tax systems with a special focus on developing countries" (see footnote 8), section 4.2.4: Domestic Collection of Information.

Filing the tax return	
Q1.	What percentage of individual taxpayers and companies within the current jurisdiction file tax returns each tax year, respectively?

Background and rationale

Other than in specific (and rarer) cases where taxpayers report information through a separate voluntary procedure or through whistle-blowing, almost all direct reporting by taxpayers will come in the form of the filing of tax returns. While taxpayers which are entities will almost always be required to file their tax returns annually, the same cannot be said about individual taxpayers. In many jurisdictions, individuals who are employees may be subjected to a different administrative regime, ranging from cases where they do not need to file tax returns at all (the assumption being that their employer would have provided the necessary information to the tax authority), to cases where the tax returns are largely pre-filled and taxpayers merely have to confirm that the information is accurate, and other cases where information on employment income may be pre-filled, but taxpayers have to complete the other sections in the tax returns.

If a large proportion of taxpayers within a jurisdiction do not file tax returns, or, more generally, are not used to providing additional information in their tax returns, the amount of information that can be gathered by the tax authority through direct reporting and returns may be limited, even if legislation is passed to require taxpayers to provide crypto information directly. Taxpayers who are not used to providing such information may not be readily inclined to comply.

In a jurisdiction where a large proportion of taxpayers are not used to filing tax returns or providing additional information in their tax returns, additional mechanisms, such as a special penalty regime, voluntary disclosures and/or whistle-blowing may be needed, but the tax authority will probably have to rely heavily on information from intermediaries instead.

Q2.	Does the existing tax system specifically require taxpayers to provide information on crypto income, assets and transactions in their tax returns? If so, what kind of information is required?

Background and rationale

An easy way for tax authorities to gather crucial crypto information is to require taxpayers to provide such information in their tax returns. Such information should include their crypto income, holdings and transactions at the minimum.

Most jurisdictions will not presently require taxpayers to provide all the above-mentioned categories of information. In many jurisdictions, taxpayers will, at most, be required to report information on the income derived from crypto activities, and even then, such information may be reported together with income from other sources and not specifically indicated to be income from crypto activities.

It is suggested that jurisdictions include a section in their tax filing forms or an annexure requiring taxpayers (who are entities at least, even if individual taxpayers are not included) to specifically report crypto information. Such information is to be provided in addition to reporting crypto income in the regular form.

Q3.	Would the taxpayers be required to provide information relating to the most recent basis period (generally, the last tax year) only or the past few basis periods?

Background and rationale

Generally, taxpayers will only be required to file returns based on information relating to the most recent basis period. However, a tax authority will likely have information from preceding basis periods due to the obligation on taxpayers to file returns on a recurrent basis. Given that any crypto information reporting requirements are likely to be newly introduced, during the first period of implementation, tax authorities will likely not have any information from preceding basis periods, raising the question of whether (at least for the first such filing by taxpayers) they should require taxpayers to include information relating to the past three to five years.

It is likely that requiring taxpayers to file their returns based on information relating to more than the most recent basis period would impose a considerable administrative burden on taxpayers and may face legal restrictions. As most jurisdictions would already require taxpayers to keep records for a number of years, perhaps the requirement should be to file for the most recent basis period, but to reserve the right to ask for more information should it be required.

Q4.	Does the existing tax system require taxpayers to provide information in their tax returns on common crypto activities relating to them (such as mining, forging, airdrops and forks)?

Background and rationale

There are a number of common crypto activities which the tax authorities may wish to obtain specific information on. Mining and forging can simplistically be viewed as processes which support the underlying infrastructure of particular cryptoassets and those providing such services are rewarded with tokens accordingly.[17] Airdrops refer to the distribution of digital tokens for free. This generally is undertaken as a marketing tool to increase awareness of a new token and to increase liquidity in the early stages of issuance.[18] Hard forks are also known as "permanent chain splits",

17 Ibid., section A.1.2: The Underlying Technology.

18 See OECD, *Taxing Virtual Currencies: An Overview of Tax Treatments and Emerging Tax Policy Issues* (Paris, 2020) p. 12; and Vincent Ooi, "Administrative concessions and the efficient taxation of digital tokens in Singapore", *Banking & Finance Law Review*, vol. 39, No.2, (May 2023), pp. 219, 230.

where a new version of tokens is created, with both old and new tokens coexisting.[19]

By requiring taxpayers to specifically provide information in their returns on common crypto activities, the tax authority can get a better picture of the scale of such activities in their jurisdiction, which may inform further policy decisions.

If taxpayers are already required to provide information on their crypto income, asset holdings and transactions, there may not be a need to require them to specifically provide information on common crypto activities, since it should technically be possible to derive information about the latter from the former. The specific requirement to provide information on common crypto activities can give rise to a data point that can be used to check whether taxpayers have accurately computed and reported their crypto income, though this benefit will have to be weighed against the additional administrative burden which this may impose on taxpayers.

As a practical example, the following questions were asked on the 2023 United States of America individual tax return: At any time during 2023, did you: (a) receive (as a reward, award, or payment for property or services); or (b) sell, exchange, or otherwise dispose of a digital asset (or a financial interest in a digital asset)? The instructions provide: For example, check "Yes" if at any time during 2023 you: (a) received digital assets as payment for property or services provided; (b) received digital assets as a result of a reward or award; (c) received new digital assets as a result of mining, staking and similar activities; (d) received digital assets as a result of a hard fork; (e) disposed of digital assets in exchange for property or services; (f) disposed of a digital asset in exchange or trade for another digital asset; (g) sold a digital asset; or (h) otherwise disposed of any other financial interest in a digital asset. The instructions further provide: You have a financial interest in a digital asset if you are the owner of record of a digital asset, or have an ownership stake in an account that holds one or more digital assets, including the rights and obligations to acquire a financial interest, or you own a wallet that holds digital assets.

Voluntary Reporting	
Q5.	If the existing tax system does not require crypto information to be provided when filing tax returns, does it have a mechanism that allows taxpayers to provide such information voluntarily?

Background and rationale

Especially in jurisdictions where individual taxpayers do not tend to file tax returns, a separate mechanism might be put in place to allow taxpayers to provide information to the tax authority specifically on their crypto income, assets and transactions. The underlying idea is that there may be taxpayers who have no intention to evade taxes but lack the technical knowledge to be able to accurately understand the tax consequences of their cryptoasset holdings and transactions.

19 See OECD, *Taxing Virtual Currencies*, p. 15; and Vincent Ooi, "Administrative concessions and the efficient taxation of digital tokens in Singapore", pp. 230–231.

As an incentive for voluntarily providing such information, a taxpayer who has accurately provided the required information can be assured that no penalties for wrongly omitting or computing crypto income on cryptoassets will be applied. This would allow the tax authority to still assess and collect the correct amount of tax due on such holdings and transactions, but would allow the taxpayers peace of mind in that they will not be held to be engaged in tax evasion or negligence should they make use of this mechanism.

This mechanism may be analogized to the voluntary disclosure programmes which are quite common in a variety of jurisdictions. The International Monetary Fund (IMF) notes that the potential success of such voluntary programmes hinges on increased detection capabilities by the tax authorities and a firm commitment to take follow-on action against taxpayers who do not participate in such programmes and choose to hide their assets.[20] There would appear to be few drawbacks in offering such a mechanism to individuals, and possibly small and medium-sized enterprises, but may enhance the sources of information for the tax authority. This mechanism will have to be supplemented with other sources and there needs to be the credible prospect of crypto audits for it to be successful.

Whistle-blowing mechanisms	
Q6.	Does the existing tax system have a formal whistle-blowing mechanism that could also apply to reporting cryptoasset-related information?

Background and rationale

One potential source of information for the tax authority is a whistle-blowing mechanism that would allow users to provide information if they believe that someone else is evading tax. Such users could be given some kind of reward for their efforts, that might be proportionate to the amount of tax recovered by the tax authority. While many jurisdictions already have some kind of similar scheme, this might be particularly useful in the context of crypto taxation, especially if the information provided helps to identify the ultimate users behind certain wallets. The United States Internal Revenue Service (IRS) has found that it may be more cost-effective to operate a whistle-blowing mechanism than attempt to use other methods of selecting returns for audits.[21]

Researchers have been debating the propriety new whistle-blowing mechanism, whereby the tax authority would periodically publicize lists of bitcoin payment addresses for which it seeks the identities of the ultimate owners.[22]

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20 Dora Benedek and others, "Voluntary disclosure programs: Design, principles, and implementation considerations," *International Monetary Fund Technical Notes and Manuals*, No. 2022/02 (Washington, D.C., IMF, 2022), p. 7.

21 Michelle Kwon, "Whistling Dixie about the IRS whistleblower program thanks to the IRC confidentiality restrictions", *Virginia Tax Review*, vol.29, No. 3, (2010), pp. 447, 448–449.

22 Arvind Sabu, "Reframing bitcoin and tax compliance", *St. Louis University Law Journal*, vol.64, No. 2 (Winter, 2020), pp.181, 214.

Risk 1.2: Intermediaries reporting

As noted above, due to the inherent decentralized design of the blockchain, technically, users can hold cryptoassets and engage in crypto transactions without having to rely on intermediaries at all, by engaging in peer-to-peer -transfers using their own wallets. However, at the present moment, at least, the proportion of crypto holders who are technologically savvy enough to navigate the holding and transfer of cryptoassets themselves, without the need for intermediaries, is rather low. The vast majority of crypto holders still need to use intermediaries, and thus the existing tax legislation should be reviewed to ensure that the tax authorities can compel intermediaries to collect and remit such information.[23] Apart from crypto intermediaries, traditional intermediaries such as banks and financial institutions may also be able to provide valuable information to the tax authority because the traditional intermediaries are often involved in crypto transactions, particularly where cryptoassets are converted to fiat currency.

Intermediaries reporting questionnaire **(Preliminary questions for Risks 1.2.1–1.2.3)**

Given that risks 1.2.1-1.2.3 all concern the broad issue of the reporting obligations of intermediaries and the gathering of crypto information from those sources, there is a common set of questions—the intermediaries reporting questionnaire—that should be answered when considering any of those risks. These questions set the background for examining more specific situations when considering the various crypto tax risks later.

Standardized framework	
Q1.	Is the jurisdiction likely to have a significant proportion of its residents using the services of intermediaries?

Background and rationale

The proportion of residents using the services of traditional intermediaries may vary depending on how developed the domestic banking and financial sector is. As most crypto users are unlikely to be technologically savvy enough to hold and transact in cryptoassets without the assistance of a crypto intermediary, a high crypto adoption rate in the jurisdiction is likely to correlate with a significant proportion of residents using the services of crypto intermediaries. The proportion of residents using the services of various kinds of intermediaries will give some indication of the potential success of attempts by the tax authority to obtain a comprehensive picture of taxpayer crypto holdings and transactions from intermediaries.

23 Also see Ooi, "Report on the challenges which digital assets pose for tax systems with a special focus on developing countries" (see footnote 8), Section 4.2.4: Domestic Collection of Information.

Depending on the prevalence of intermediaries which residents in a jurisdiction tend to engage with (be it crypto or traditional intermediaries, domestically or overseas based), the tax authority may vary its focus accordingly.

Q2.	Are most of the intermediaries based within the jurisdiction or in other jurisdictions?

Background and rationale

It may be difficult to bring certain intermediaries (particularly crypto intermediaries) within the jurisdiction of the relevant authorities, especially where they are based overseas but cater to residents in another jurisdiction. In such cases, it may be necessary to obtain crypto information through the international exchange of crypto information mechanisms instead (discussed in the commentary for Risk 1.4). It is noted that under the CARF, there is a "hierarchy of nexus rules" designed to operate in situations where it may be possible for a relevant cryptoasset service provider (RCASP) to be subject to CARF obligations in two or more jurisdictions.[24] More information on the CARF can be found in appendix III.

A jurisdiction where most of the intermediaries providing services to the residents are based overseas will probably face difficulties compelling such intermediaries to comply with requests for crypto information (unless they voluntarily accede to such requests). As such, the tax authority would likely have to rely more on information from other foreign tax authorities through an exchange of crypto information mechanism. Such a jurisdiction should consider ratifying and implementing the relevant international instruments and have in place systems that would allow it to effectively use such information.

Q3.	Does the existing tax system have a standardized framework for intermediaries reporting?

Background and rationale

In order for the information from the intermediaries to be easily analysed and used by the tax authority, it is ideal for the information to be received in a standardized format that is compatible with the information already held by the tax authority and also information that may be received from other sources.

As noted above, adopting one of the formats prescribed by an international exchange of crypto information mechanism can be helpful for jurisdictions.[25]

Q4.	If the jurisdiction has decided to proceed with an international exchange of crypto information mechanism (such as the Crypto-Asset Reporting Framework (CARF)), has the domestic legislation been amended to require intermediaries to provide crypto information?

24 OECD, *Crypto-Asset Reporting Framework,* (see footnote 10), pp. 29–30.

25 See the commentary on the crypto reporting questionnaire, above. Also see, ibid., pp.31–35.

Background and rationale

Although jurisdictions may adopt standardized frameworks such as the CARF, such rules do not necessarily become law immediately in a dualist legal system, which requires international agreements to be incorporated into domestic law through amendments in legislation before they can have legal effect within the state. Legislatures must therefore ensure the relevant amendments have been made so that international obligations signed by the executive branches of government are incorporated into domestic law. Otherwise, any requirements imposed on intermediaries to collect and report information to the tax authority will not be strictly legally enforceable.

Risk 1.2.1: Centralized crypto exchanges

Crypto exchanges can broadly be divided into two categories: centralized exchanges and decentralized exchanges.[26] Centralized crypto exchanges are those which directly facilitate crypto transactions for crypto holders; the transfers are done on the exchanges themselves. In many cases, centralized exchanges may operate on a custodial model, where the cryptoassets are held by the exchange and not by the specific wallets controlled by the transacting parties themselves.[27]

Refer to the crypto reporting questionnaire for the first five questions.
Refer to the intermediaries reporting questionnaire for the next four questions.

Please complete the five questions listed in the crypto reporting questionnaire above and the four questions listed in the intermediaries reporting questionnaire above, before proceeding with the following questions, as they are crucial for setting the necessary context for discussing the various specific kinds of intermediaries.

Q1.	Does the existing tax system have a definition of a "centralized crypto exchange"?

Background and rationale

It is expected that the majority of crypto users in a jurisdiction will hold and transfer their cryptoassets through the use of centralized crypto exchanges, since this will often be the easiest way for them, requiring little to no technical knowledge of cryptoassets and transactions. However, few jurisdictions or international mechanisms currently use the express term "centralized crypto exchange" in their legislation or frameworks. The distinction between "centralized" and "decentralized" crypto exchanges in these commentaries is to provide background information and highlight the fact that many decentralized crypto exchanges may not be subject to the

26 Henri Arslanian, *The Book of Crypto: The Complete Guide to Understanding Bitcoin, Cryptocurrencies and Digital Assets,* (Cham, Switzerland, Springer Nature, 2022), p.335.

27 Ibid., p. 347.

same reporting standards as centralized crypto exchanges, rather than to encourage jurisdictions to specifically define centralized crypto exchanges.

The CARF refers to RCASPs rather than centralized crypto exchanges. RCASPs are defined as any individual or entity that, as a business, provides service effectuating exchange transactions for or on behalf of customers, including by acting as a counterparty, or as an intermediary, to such exchange transactions, or by making available a trading platform.[28] These main categories of transactions are discussed in the commentary for the following question.

It is expected that the majority of crypto exchanges providing services to the users in a jurisdiction will probably be centralized crypto exchanges which are likely to be within the scope of international exchange of crypto information mechanisms. For example, they are likely to fall within the definition of RCASPs under the CARF framework. Jurisdictions who wish to implement reporting obligations for intermediaries who are centralized crypto exchanges in their domestic legislation may consider adopting the definitions laid out in international exchange of crypto information mechanisms for this purpose.

Q2.	If so, what information does a centralized crypto exchange need to report?

Background and rationale

There are three main types of transactions which RCASPs are required to report: 1) exchanges between relevant cryptoassets and fiat currencies; 2) exchanges between one or more forms of relevant cryptoassets; and 3) transfers (including Reportable Retail Payment Transactions) of relevant cryptoassets.[29] RCASPs must provide the following information about the relevant reportable persons: 1) the person's name, 2) address, 3) jurisdiction of tax residence, 4) TIN and 5) date and place of birth.[30]

Other information about the relevant transactions must also be provided such as: 1) the full name of the relevant cryptoassets; 2) any acquisitions and disposals of the cryptoassets (whether exchanged for fiat currency or other crypto-assets); 3) retail payment transactions; and 4) other transfers of cryptoassets.[31] The reporting is to be done on an aggregate basis by type of transactions, distinguishing between: 1) outward and inward transactions, 2) crypto-to-crypto transactions and 3) transfer types. The reporting should be done in a fiat currency. If fiat currency were not used in the transaction, the reportable value should be based on the market value of the relevant asset at the time of the relevant transaction.[32]

28 OECD, *Crypto-Asset Reporting Framework* (see footnote 10), p. 19.

29 Ibid., pp. 14, 22-23, and 31–36.

30 Ibid., Section II(A) of the CARF rules, pp.18-19.

31 See the commentary on the crypto reporting questionnaire, above. Also see, ibid., pp.31-35.

32 Noam Noked, "Ending the crypto tax haven", *Harvard Business Law Review*, vol. 15, No. 171 (November 2023), pp. 16–17; and OECD, *Crypto-Asset Reporting Framework*, pp.18–19. Issues of valuation are addressed in pp. 36–38.

Jurisdictions who wish to implement reporting obligations for centralized crypto exchanges can consider adopting the framework laid out in international exchange of crypto information mechanisms for this purpose.

Risk 1.2.2: Decentralized crypto exchanges

Not all situations where crypto holders use crypto exchanges will result in transactions occurring on the exchange itself. Decentralized crypto exchanges operate differently from centralized crypto exchanges in that they are designed to eliminate the involvement of any third parties in the actual crypto transactions themselves. Decentralized crypto exchanges facilitate the matching of parties who wish to enter into a transaction, while leaving the actual transfer to the parties themselves to execute (in a peer-to-peer transfer).[33]

Refer to the crypto reporting questionnaire for the first five questions.
Refer to the intermediaries reporting questionnaire for the next four questions.

Please complete the five questions listed in the crypto reporting questionnaire above and the four questions listed in the intermediaries reporting questionnaire above, before proceeding with the following questions, as they are crucial for setting the necessary context for discussing the various specific kinds of intermediaries.

Q1.	Does the jurisdiction have a definition of a "decentralized crypto exchange"?

Background and rationale

The use of decentralized crypto exchanges requires more technical knowledge of cryptoassets and transactions on the part of the users. Thus, their use is unlikely to be as widespread as centralized crypto exchanges. As noted above,[34] few jurisdictions or international mechanisms currently use the term "decentralized crypto exchange" in their legislation or frameworks. The distinction between "centralized" and "decentralized" crypto exchanges in these commentaries is to provide background and highlight the fact that many decentralized crypto exchanges may not be subject to the same reporting standards as centralized crypto exchanges.

Decentralized crypto exchanges can but may not always fall within the definition of RCASPs under the CARF, for example, because they may not, as a business, provide services effectuating exchange transactions.[35] They may, for example, merely act as a "bulletin board" for transacting parties to post buy prices, sell prices, or conversion prices of their cryptoassets.[36]

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33 Iwa Salami, "Decentralised finance: The case for a holistic approach to regulating the crypto industry", *Journal of International Banking and Financial Law,* vol. 35, No. 7 (November 2020), pp. 496, 497.

34 In the commentary for Risk 1.2.1: Centralized crypto exchanges.

35 OECD, *Crypto-Asset Reporting Framework* (see footnote 10), p. 19.

36 Noam Noked, "Ending the crypto tax haven", p. 37.

There are considerable difficulties with regulating decentralized crypto exchanges at the moment, with potential gaps in the international exchange of crypto information mechanisms imposing reporting obligations on them. Jurisdictions, especially those with limited resources, may wish to focus on centralized crypto exchanges as a first step and monitor further developments internationally with respect to decentralized crypto exchanges.

Q2.	If so, what information does a decentralized crypto exchange need to report?

Background and rationale

As noted above, it is unlikely that most jurisdictions will have a specific definition for centralized crypto exchange. Such exchanges which do not fall within the definition of RCASPs under the CARF will not be subjected to reporting obligations under the CARF.

While it may appear to be a problem that some decentralized crypto exchanges may not be subject to reporting obligations under a framework such as the CARF, it is noted that due to the differences in how they operate as compared to centralized crypto exchanges, regulating both in the same way may not be appropriate.[37] It is likely that as this area develops, new frameworks may be developed for imposing reporting obligations on decentralized crypto exchanges. But until then, jurisdictions may wish to focus on centralized crypto exchanges, particularly as the number of users utilizing the services of decentralized crypto exchanges is likely to be low.

Risk 1.2.3: Traditional intermediaries

Cryptoassets are fundamentally useless if they cannot be traded for fiat currency or real-world goods or services. In many cases, at some point, cryptoassets must interface with the traditional banking system to be worth anything. Thus, information from traditional intermediaries from banks and other financial institutions can play a crucial role in enabling tax authorities to administer crypto taxation. Tax authorities should look out for and carefully monitor sudden inexplicable inflows of funds, which could suggest that cryptoassets have been exchanged for fiat currency.[38] One particular challenge is noted, in that crypto adoption amongst residents tends to be high in jurisdictions with less-developed traditional banking systems.[39] Such jurisdictions may have difficulties obtaining taxpayer information from traditional intermediaries.

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37 Jack Solowey and Jennifer J. Schulp, "Regulatory clarity for crypto marketplaces part I: Decentralised exchanges", *CATO Institute Briefing Paper,* No. 154 (10 May 2023).

38 Also see Ooi, "Report on the challenges which digital assets pose for tax systems with a special focus on developing countries" (see footnote 8), Section 4.2.4: Domestic Collection of Information.

39 Dimitris Drakopoulos, Fabio Natalucci and Evan Papageorgiou, "Crypto boom poses new challenges to financial stability", International Monetary Fund Blog, 1 October 2021.

Refer to the crypto reporting questionnaire for the first five questions. Refer to the intermediaries reporting questionnaire for the next four questions.

Please complete the five questions listed in the crypto reporting questionnaire above and the four questions listed in the intermediaries reporting questionnaire above, before proceeding with the following questions, as they are crucial for setting the necessary context for discussing the various specific kinds of intermediaries.

Q1.	Does the existing tax system have any mechanisms in place to collect information from traditional intermediaries (including those applying international standards such as the Common Reporting Standard (CRS))?

Background and rationale

Many jurisdictions have implemented the Common Reporting Standard (CRS)[40] into their domestic legislation, enabling them to gather information from traditional intermediaries. There is also the possibility of other forms of domestic legislation which are not directly based on the CRS standards that require traditional intermediaries to share taxpayer information with the tax authorities.

Jurisdictions may consider implementing standards for the collection of information in their domestic legislation. The CRS may be one suitable example.

Q2.	If so, are the existing mechanisms effective in collecting taxpayer information?

Background and rationale

While many jurisdictions have ratified the CRS, the enactment of the CRS framework into domestic legislation and its successful operation are different matters entirely. This requires a considerable amount of resources to be invested, so that vast amounts of data can be collected, processed and exchanged. Some jurisdictions may not have the necessary infrastructure in place to require traditional intermediaries to report taxpayer information to the tax authorities and/or collect and process such information.[41]

Although different jurisdictions are at different stages of implementing mechanisms that facilitate reporting by traditional intermediaries, this is an area that has the potential to promote better tax administration across the entire tax system and not just for crypto taxation alone. A jurisdiction which has low capacity to collect and use information from traditional intermediaries will generally be restricted to relying on taxpayer-filed returns for information and may find conducting audits difficult. Such

40 OECD, *Standard for Automatic Exchange of Financial Account Information in Tax Matters,* 2nd ed. (Paris, OECD Publishing, 2017).

41 Paul Foster Millen and Peter A. Cotorceanu, "Old tricks for new dogs: The OECD's Cryptoasset Reporting Framework", *Tax Notes International*, vol. 112, No. 3 (16 October 2023), pp. 345, 359.

a jurisdiction need not necessarily implement the full CRS framework for collecting information from traditional intermediaries, but could take steps to gradually build infrastructure in this area.

Q3.	Do the current reporting obligations of traditional intermediaries assist the authorities in obtaining information regarding cryptoasset transactions?

Background and rationale

Most current mechanisms of traditional intermediaries reporting (of domestic or international origin) tend to fail to capture the reporting of many categories of cryptoassets and transactions. They were likely to have been drafted before the widespread use of such assets and transactions. As such, the primary function of the reporting obligations of traditional intermediaries in the context of crypto taxation is to highlight points where cryptoassets interface with the traditional banking system. Traditional intermediaries reporting by itself is unlikely to give tax authorities direct information on cryptoassets and transactions.

Jurisdictions should use information from traditional intermediaries as an additional source of information to form a comprehensive picture of a taxpayer's holdings and activities. It can be particularly useful when processed in a system that can flag taxpayers for further audits.

Risk 1.3: Investigative powers

Information from intermediaries can be a great way for tax authorities to build up a comprehensive picture of a taxpayer's holdings and activities. However, to fully benefit from such information, it should not be used by itself, but instead, serve as a starting point for tax authorities, since such information can be analysed and used to identify potential opportunities for further investigations and audits. Thus, it is important to ensure that a tax authority in a jurisdiction has strong enough investigative powers to further probe taxpayers which are flagged based on the information provided by direct reporting and intermediaries. In jurisdictions where intermediaries reporting is likely to have mixed success, the investigative powers of the tax authority become even more important.

The OECD *Fighting Tax Crime* report lists four main models of investigating tax crimes, sorted based on the relevant officials tasked with conducting investigations: where 1) the tax administration directs and conducts investigations; 2) the tax administration conducts investigations directed by the prosecutor; 3) a specialist agency outside the tax administration conducts tax offence investigations which may involve public prosecutors; and 4) the police or public prosecutors conduct investigations.[42] While this toolkit refers to the tax authorities in general, readers can refer to the models mentioned by the OECD for discussion on investigative powers related to the relevant officials under any of the four models.

42 OECD, *Fighting Tax Crime—The Ten Global Principles,* 2nd ed. (Paris, OECD Publishing, 2021), p.30, para. 41.

Refer to the crypto reporting questionnaire for the first five questions.

Please complete the five questions listed in the crypto reporting questionnaire above before proceeding with the following questions, as they set the necessary context for discussing investigative powers.

Documents and information from taxpayers	
Q1.	Do tax authorities currently possess any powers to demand documents and ask for additional information from taxpayers (during the processing of tax returns and during an audit)?

Background and rationale

Tax authorities should have the investigative powers necessary to build a clear picture of a taxpayer's affairs. This would include the powers to demand additional documents and information, which should be expressly provided for in domestic legislation. Taxpayers who do not comply with such requests should be subject to deterring penalties unless they can show reasonable excuse for their non-compliance. If the tax authorities do not have such powers, it may be necessary to work with other law enforcement agencies which may have such powers.[43]

It is generally recommended for tax authorities to be given investigative powers as they tend to have the best understanding of tax law and have the most information on taxpayers. In any jurisdiction where the investigating officials are not the tax authority (which may be justified if the former has specialized expertise and is generally better placed to conduct investigations), systems can be put in place for the two government agencies to work closely with each other. In any case, at least one of the relevant investigating agencies should have statutory powers to require taxpayers to hand over documents and additional information.

Document and information from third parties	
Q2.	Do tax authorities currently possess any powers to demand documents and ask for additional information from third parties (e.g., banks)?

Background and rationale

Apart from statutory powers to require taxpayers themselves to hand over documents and additional information, countries may consider whether it may be helpful that a tax authority have the power to demand the same from third parties who are likely to have such information, such as banks. Whether or not this is something that countries would promote will depend on each country's history and preferences.

In case a country is interested in the tax authority having broad power, these would generally be separate from and in addition to legislation which provides for automatic

43 Ibid., p.30, para. 44.

reporting of taxpayer information by intermediaries.[44] Legislation requiring third parties to hand over documents and additional information would generally be bound by confidentiality restrictions otherwise. The power to obtain third-party documentary information is particularly appropriate where the information sought is not readily available in a physical form (e.g., banks which do not maintain paper copies of a customer's bank statements or telecommunications provider's data) since this power allows the third party time to collect the demanded material.[45] These powers can take the form of a subpoena, production order, or other powers to demand or compel the handing over of documentary information.[46]

The OECD *Fighting Tax Crime* report indicates that the vast majority of jurisdictions surveyed authorize the agency responsible for tax crimes investigation to exercise these powers themselves, with some jurisdictions requiring the agency to seek the assistance of other agencies to exercise the power on its behalf.[47] In any case, a jurisdiction should consider empowering the authorities to require third parties to hand over documents and additional information.

Compelling attendance in investigations	
Q3.	Do tax authorities currently possess any powers to compel the attendance of any taxpayer to be interviewed in an investigation or for a court hearing?

Background and rationale

In many situations, an investigation into tax crimes would be greatly aided by going beyond requiring a taxpayer to produce documents and information and requiring taxpayers, their employees or their representatives to appear in person to be interviewed by the investigating authority or to appear in court as witnesses. It would not be ideal if an investigating authority had to rely on voluntary compliance. It is noted that, particularly for taxpayers who may be suspected of tax crimes, the power to require a taxpayer to appear for an interview or before a court is generally a power to initiate an interview rather than a power to compel the person to speak or provide information during that interview. This is due to the fact that many jurisdictions will have a right against self-incrimination.[48]

The OECD *Fighting Tax Crime* report indicates that the vast majority of jurisdictions surveyed authorize the agency responsible for tax crimes investigation to exercise these powers themselves, with some jurisdictions requiring the agency to seek the assistance of other agencies to exercise the power on its behalf.[49] It is suggested that jurisdictions consider adopting legislation expressly empowering the investigating

44 See the commentaries for Risk 1.2: Intermediaries reporting, above.

45 OECD, *Fighting Tax Crime*, p.30, para. 46.

46 Ibid.

47 Ibid.

48 Ibid., p.35, para. 59.

49 Ibid.

authorities to require taxpayers to present themselves for interviewing by the authorities and to appear in court when summoned. Such legislation should ideally be drafted with separate provisions applying to taxpayers, and also for different situations, such as being interviewed by the authorities and for court appearances.

Raids and seizing equipment and documents	
Q4.	Do tax authorities currently possess any powers to conduct raids?

Background and rationale

Powers to conduct searches and raids can be useful to the investigating authorities in two main situations. They can serve as a follow-up action when demands to hand over documents or information within a specific period of time are not met.[50] They can also be used in situations where the parties being raided are not given any advance notice (i.e., a surprise raid), which can be useful in situations where there is a risk that the party being raided may seek to destroy relevant evidence if tipped off beforehand. The power to conduct searches and raids may sometimes be subject to certain legal constraints on the part of the investigating authorities. For example, a warrant or some form of court sanction may be required before the search or raid may legally be performed.

The OECD *Fighting Tax Crime* report indicates that a majority of jurisdictions surveyed authorize the agency responsible for tax crimes investigation to exercise these powers themselves, with some jurisdictions requiring the agency to seek the assistance of other agencies to exercise the power on its behalf.[51] In any case, a jurisdiction should consider ensuring that statutory powers should be in place to empower the authorities to conduct searches or raids. There may be jurisdictions where the courts will carefully scrutinize any attempts of the authorities to exercise such powers without having to go through the courts first. In such situations, it may not be advisable to legislate to allow the authorities to exercise such powers without a warrant or other court sanction.

Q5.	Do tax authorities currently possess any powers (and technical knowledge) to enter taxpayers' premises and seize equipment (e.g., hard drives)?

Background and rationale

In the context of crypto taxation, relevant equipment may include hard drives and other forms of digital devices. There will be a strong emphasis on digital evidence such as electronic documents and banking records that may be held within computer hardware or software, tablets, cell phones, or any number of electronic storage media including storage in the cloud.[52] To ensure effectiveness, the investigating authorities

50 Ibid., p.30, para. 46.

51 Ibid., p.31, para. 49.

52 Ibid., p.33, para. 52.

must not only have the powers to access such devices, but also the expertise to be able to examine them and extract the necessary information for investigations.

The OECD *Fighting Tax Crime* report indicates that a majority of jurisdictions surveyed authorize the agency responsible for tax crimes investigation to exercise these powers themselves, with some jurisdictions requiring the agency to seek the assistance of other agencies to exercise the power on its behalf.[53] Where necessary, the investigating agencies should consider appropriate training or capacity development to prepare them for these tasks.

Risk 1.4: International exchange of information

Apart from domestic sources of information, there are a range of international initiatives in place to facilitate international exchange of information which aid tax authorities in getting a clearer picture of the natural persons behind structures and transactions.[54] International exchange of information initiatives can be divided into two main categories: those which involve the exchange of traditional (non-crypto) tax information and those which involve the exchange of crypto tax information. The received information can be used by a jurisdiction's tax authority in crypto tax administration.

For Domestic information reporting and collection, refer to the questionnaires for Risks 1.1–1.3. Refer to the crypto reporting questionnaire for the first five questions.

Please complete the five questions listed in the crypto reporting questionnaire above before proceeding with the following questions, as they are crucial for setting the necessary context for discussing international exchange of information.

Q1.	Has the jurisdiction ratified any international instruments to facilitate the international exchange of information? Or does the jurisdiction rely on double taxation treaties?

Background and rationale

For the exchange of traditional (non-crypto) tax information on financial assets, one of the major international initiatives is that of the CRS (discussed above).[55] For the exchange of crypto tax information, the three main international initiatives are the OECD's CARF, the European Commission's Directive on Administrative

53 Ibid.

54 See Ooi, "Report on the challenges which digital assets pose for tax systems with a special focus on developing countries" (see footnote 8), Section 4.2.5: Exchange of Information.

55 OECD, *Standard for Automatic Exchange of Financial Account Information in Tax Matters* (see footnote 40). Also see the commentaries on Risk 1.2.3: Traditional intermediaries, above.

Cooperation (DAC8) and the FATF guidance on virtual asset service providers.[56] In terms of international instruments, adoption of the CRS is most commonly done through a Multilateral Competent Authority Agreement (CRS MCAA).[57] As for CARF, it can be adopted through the CARF MCAA.[58] It is also possible for jurisdictions to enter into double taxation treaties as the basis of international exchange of information instead.

Jurisdictions which seek to benefit from international exchange of information (traditional or crypto) can consider adopting international standards by entering into MCAAs accordingly. Some examples of such standards include the CRS and CARF. This decision will need to take the resourcing and priorities of countries into account, as implementing the international standards require human resources and technology to be able to benefit from them.

Q2.	Has the jurisdiction passed new legislation or is there a need to pass additional legislation to implement the exchange of information?

Background and rationale

Ratifying international exchange of information instruments does not typically render them effective in domestic law immediately in a dualist legal system.[59] Domestic legislation must generally be amended to incorporate those provisions if they are to have legal effect.

Jurisdictions who have a dualist legal system should ensure that any international exchange of information instruments that they have ratified are separately enshrined in domestic legislation.

Q3.	Has the jurisdiction ratified CARF?

Background and rationale

Forty-eight countries and jurisdictions have issued a joint statement indicating that they will implement the CARF.[60]

Jurisdictions may consider ratifying the CARF if they find that they have the

56 See Section I.a. of the appendix. It should be noted that while the European Commission's MiCA includes provisions on exchange of information, those are focused on the supervision of issuers and providers and not on tax transparency or exchange of tax-related information.

57 See OECD, Multilateral Competent Authority Agreement on Automatic Exchange of Financial Account Information (MCAA), (2014).

58 OECD, *Crypto-Asset Reporting Framework* (see footnote 10), p. 76.

59 See the commentary for the intermediaries reporting questionnaire, above.

60 OECD, "OECD Secretary-General Mathias Cormann welcomes pledge by 48 countries to implement global tax transparency standard for crypto-assets by 2027", Press release, 10 November 2023.

necessary resources and a cost-benefit analysis shows that the benefits of additional information on cryptoassets held abroad outweigh its costs.

Risk 1.5: Taxation of illegal transactions

The taxation of illegal transactions is an area that requires special consideration by jurisdictions. Just because a transaction is illegal does not mean that it will have to be disregarded by the tax system. In many cases, income derived from illegal transactions will nevertheless be taxable. That said, tax authorities should consider framing any guidance in this area carefully so as not to accidentally give the impression that they are in any way condoning or sanctioning illegal activity. As cryptoassets and transactions are sometimes subject to special regulations or even outright bans, a jurisdiction will need to consider what approach it wishes to take with respect to the taxation of such assets and transactions.

Legal nature of cryptoassets	
Q1.	Is the mere holding of cryptoassets prohibited in the jurisdiction?

Background and rationale

Some jurisdictions have imposed a blanket ban on cryptoassets, where the holding of cryptoassets is prohibited. Examples include Algeria, Egypt, Iraq, Qatar, Oman, Morocco, Tunisia and Bangladesh. Whether to make the holding of cryptoassets illegal is a policy decision on the part of each jurisdiction. Jurisdictions that take this position are unlikely to receive any crypto tax information from direct reporting or from crypto intermediaries. Instead, such jurisdictions would need to obtain their information from other sources, such as traditional intermediaries, and use such information as a starting point for further investigations into a taxpayer's affairs.

Jurisdictions which impose a ban on the holding of cryptoassets will have to focus their resources on gathering information from traditional intermediaries.

Q2.	Are there any restrictions pertaining to cryptoassets in the jurisdiction?

Background and rationale

In contrast to other jurisdictions that have banned cryptoassets entirely, some have instead prohibited specific activities that can be part of the cryptoasset's life cycle, such as banning the purchase and sale of virtual currencies, or its use as a means of payment. Depending on the precise nature of the restrictions on cryptoassets, a jurisdiction with such restrictions may accordingly be unable to rely on certain potential sources of information. For example, prohibiting cryptocurrency exchanges likely means that no information would be forthcoming from crypto intermediaries.

As noted above, depending on the scope of restrictions on cryptoassets, a jurisdiction may need to focus their resources on gathering information from traditional intermediaries.

Q3.	Are transactions of cryptoassets prohibited unless conducted through authorized crypto exchanges?

Background and rationale

Several jurisdictions have considered legislation which prohibits transactions of cryptoassets unless they are conducted through authorized crypto exchanges. Notably, under the newly introduced MiCA regulations in the European Union (EU), any company seeking to offer crypto services within the EU—whether custody, trading, portfolio management or advice—will need to be authorized by one of the national financial regulators of the EU.[61] Provided that the relevant authorities are able to effectively ensure that transactions involving cryptoassets are (at least mostly) conducted through authorized entities, this may assist the tax authorities in minimizing tax evasion through cryptoassets. Since authorized entities are compelled to maintain sufficient information about their customers and their transactions as part of their due diligence obligations under applicable regulations to detect any potentially illegal transactions, tax authorities may be able to access information more effectively on the ownership of certain cryptoassets which are maintained by authorized entities.[62]

Jurisdictions should consider legislation that would require crypto users to conduct their transactions through authorized crypto exchanges. Whether or not there can be an exception from peer-to-peer transactions is a matter of policy for the jurisdictions to decide, but it is certainly possible to take a position that all transactions (without exceptions) must be conducted through authorized crypto exchanges. Such exchanges would be regulated and only maintain their authorized status if they comply with requirements, such as the need to collect and hand over crypto tax information to the tax authority.

Q4.	Are overseas transactions of cryptoassets prohibited?

Background and rationale

Given that cryptoassets are very mobile and that transactions are conducted easily over the internet, it is possible for crypto transactions to be done across borders or even outside the geographical boundaries of a jurisdiction. This can make it difficult for a jurisdiction to effectively regulate any intermediaries who are operating outside the jurisdiction to facilitate such transfers. Allowing for overseas transactions of cryptoassets might also make it difficult to carefully monitor such transfers not just for tax purposes but also anti-money laundering purposes. As such, some jurisdictions might seek to deal with this potential problem by completely prohibiting any overseas transactions of cryptoassets.

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61 European Union, Regulation (EU) 2023/1114 (see footnote 12).

62 See Council of the European Union, "Council adopts directive to boost cooperation between national taxation authorities (DAC8)", Press release, 17 October 2023.

This is ultimately a policy decision for jurisdictions, but they may wish to consider whether overseas transactions may be permitted if done through an authorized exchange, which would go some way to resolve the difficulties in collecting information about such transactions (see the commentary on this for the question immediately above).

Tax rules relating to illegal transactions	
Q5.	If cryptoassets or transactions are illegal, would any income generated from them be taxable in the jurisdiction?

Background and rationale

Different positions can be taken on the taxability of income from illegal transactions. The mere fact that income is derived from illegal activity does not mean that it will inevitably lie outside the ambit of the tax system. Instead, in most jurisdictions, such income will remain taxable. This is the case in many Commonwealth jurisdictions.[63] In the United States, the Internal Revenue Service has also explicitly stated that income from illegal sources (e.g., bribes, illegal drug deals, etc.) will need to be reported as income for taxation purposes.[64]

However, a distinction has sometimes been raised between acts that are, in the broader sense, illegal, and acts that are criminal in nature, with the latter plausibly being exempt from tax. For example, in the European Court of Justice case of *Witzemann v Hauptzollamt München-Mitte*, it was said that "a line must be drawn between … transactions that lie so clearly outside the sphere of legitimate economic activity that, instead of being taxed, they can only be the subject of criminal prosecution and, on the other hand, transactions which, though unlawful, must none the less be taxed, if only for the sake of ensuring, in the name of fiscal neutrality, that the criminal is not treated more favourably than the legitimate trader."[65]

It is noted that in some cases, illegally obtained assets may be confiscated by the government under domestic laws. Thus, the issue of taxing income from illegal transactions may not arise at all.[66]

63 See King's Bench Division England & Wales, *Mann v Nash (HM Inspector of Taxes),* File no. 814 of 1932, Judgment, 10 March 1932; Supreme Court of Canada, *Minister of Finance v Smith,* [1927] AC 193, Judgment, 27 July 1926; Scotland, *Lindsay, Woodward and Hiscox v Commissioners of Inland Revenue* (1932) 18 TC 43, Judgment, 18 November 1932; and Mohsin Hingun and Nafiu S. Olaitan, "The scope of taxation of income from illegal activities in selected common law jurisdictions", *IIUM Law Journal*, vol.23, No. S1 (2015), p. 385.

64 IRS Publication 17 (2023), Your Federal Income Tax, available at the US IRS website (https://www.irs.gov/) (accessed on 24 October 2024).

65 *Witzemann v Hauptzollamt München-Mitte,* C-343/89, Opinion of AG Jacobs, 25 October 1990, para. 10, available at https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX:61989CC0343 (accessed 24 October 2024).

66 See International Centre for Asset Recovery, *Tracing Illegal Assets—A Practitioner's Guide* (Basel, Switzerland, Basel Institute on Governance, 2015), chapter 5.

Jurisdictions should review their tax laws to determine whether income from illegal assets or transactions are, nevertheless, taxable. In line with the position that most jurisdictions would find that income would still be taxable, a jurisdiction where this is not the case may wish to evaluate amending its legislation to provide for this. However, tax authorities who wish to avoid giving the impression that the taxation of certain crypto transactions indicates that banned crypto transactions will be legalized must emphasize that taxation of such crypto transactions does not indicate the condoning of such transactions.

Q6.	If so, would the existing tax system allow taxpayers to offset or deduct properly incurred expenses?

Background and rationale

In most Commonwealth countries, expenses incurred from illegal transactions are deductible if such expenses would normally be incurred in the production of income. This is because to deny the deduction of properly incurred expenses would have the effect of unfairly penalizing the taxpayer. Denying the deduction of properly incurred expenses would be, in effect, using tax law to punish the offender, which should be the function of criminal law and not tax law.[67]

However, in some cases, some jurisdictions have nonetheless implemented legislation that provides that properly incurred expenses are not deductible from illegally obtained income. The legislature may choose to do this for several reasons, including to discourage or penalize a particular activity for public policy reasons.[68] One example of an exception to the rule that illustrates that properly incurred expenses are not deductible from illegally obtained income is in cases whereby income is obtained from bribery, obviously with the policy objective of discouraging corruption.[69]

Further, an additional factor a jurisdiction may want to take into consideration when deciding if income from illegal transactions is taxable is the effect on the country's tax base. If deductibility for properly incurred expenses is denied on illegal transactions, this would also potentially increase the country's tax base.

The majority of jurisdictions which do tax income from illegal transactions would generally allow for expenses incurred in the production of income to be deducted. It is noted that there may be other potential legal issues if the courts in a jurisdiction take the view that denying such deductions amounts to a further (unconstitutional) penalty on the taxpayer.

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67 See Hingun and Olaitan, "The scope of taxation of income from illegal activities in selected common law jurisdictions" (see footnote 63), p. 397; and Siska Lund, Deductions arising from illegal activities, *Revenue Law Journal*, vol. 13, No. 1, Article 7 (2003), p. 121.

68 Lee Burns and Richard Krever, "Taxation of income from business and investment" in *Tax Law Design and Drafting,* volume 2, Victor Thuronyi, ed. (Washington, D.C., IMF, 1996), p. 582.

69 See OECD, *Convention on Combating Bribery of Foreign Public Officials in International Business Transactions* (Paris, OECD Publishing, 1997).

Risk 2: Crypto losses and deductions risks

Risk 2.1: Losses

In order to accurately compute the amount of income derived by taxpayers and tax it accordingly, tax systems will generally have some form of mechanism allowing losses from one source to be deducted against income from another source, or income from the same source for a different basis period. However, there are several reasons for being more cautious about allowing crypto losses to be deducted in the same way,[70] most notably that of the potentially massive fluctuations in the value of cryptoassets that can lead to large and unpredictable losses being claimed.

The key risk to the tax base is that the crypto losses deducted against income from other profitable sources may reduce the net amount of revenue which can be collected from these sources and thus erode the tax base. This can be seen as a form of "cross-subsidy" of crypto losses by other non-crypto related sources of income. It is noted that in most tax systems, the rules are different for individuals and companies, with a tendency for individual taxpayers to have stricter rules.

The following three sub-risks: Losses from investment or speculation (non-business), losses from trading in cryptoassets, and losses from crypto dealings as part of a broader non-crypto business are examples of ways in which tax systems may commonly classify types of losses. They are not exhaustive and even if a jurisdiction has not enacted specific crypto legislation, its domestic law and the specific way assets are held may well require a different way of conceptualizing crypto losses. An example would include situations where crypto service providers grant contractual but not proprietary rights over cryptoassets to their users. If users are dealing with contractual rights rather than cryptoassets, a different set of tax rules may apply instead.[71]

Losses questionnaire

(Preliminary questions for Risks 2.1.1–2.1.3)

Given that Risks 2.1.1–2.1.3 all concern the broad issue of the deduction of crypto losses in different circumstances, there is a common set of questions - the losses questionnaire - that should be answered when considering any of those risks. These questions set the background for examining more specific situations when considering the various crypto tax risks later.

General features of the existing tax system	
Q1.	Does the existing tax system distinguish between a revenue (ordinary) or capital loss? If so, how would this affect the deductibility of losses?

70 See Ooi, "Report on the challenges which digital assets pose for tax systems with a special focus on developing countries" (see footnote 8), Section 2.3: Deduction of Tax Losses Against Traditional Income Sources.

71 Colin Romano, "Policy forum: The income taxation of crypto contracts", *Canadian Tax Journal*, vol. 71, No.1 (May 2023), pp. 39–57.

Background and rationale

Many jurisdictions distinguish between a revenue loss (also called ordinary loss) and capital loss, for example, the United States, the United Kingdom, Canada and Australia. Such distinction is important because it affects how the losses are used to offset taxable income. Capital losses cannot typically be deducted against revenue losses.

Q2.	Does the existing tax system distinguish between losses by source of income? If so, how would this affect the deductibility of losses?

Background and rationale

While many tax systems will distinguish between losses incurred from the carrying on of a trade or business and other general losses, there will be other tax systems that do not draw such a distinction. The following (or a hybrid of) categories are common: 1) strict source-by-source matching of each loss with income from the same source; 2) general matching of losses to income of the same general type (most prominent under a schedular system); 3) a general matching of losses to income of the same general type, but with the exception of certain types of losses such as those from a trade or business, which can be set off against all types of income; 4) no requirements of matching of losses to income, restricted only in that capital losses may only be set off against capital gains and vice versa; 5) no requirements of matching losses to gains at all (which should be very rare). The more generous the rules for the deduction of the losses are in a tax system, the greater the tax risks.

General safeguards	
Q3.	Does the existing tax system have any mechanisms for the carrying forward or carrying back of losses? If so, are there any restrictions on these mechanisms?

Background and rationale

Income tax is generally paid on the assessable income earned over a year. The starting point is that income must be assessed in the time period when it accrues or is received and cannot be shifted from year to year. However, many systems provide for losses to be carried forward or carried back if certain conditions are met. Allowing for losses to be carried forward or carried back has the potential to adversely affect revenue collection. The former may decrease future revenues, as they can be used to absorb future income, including income from other (non-crypto related) sources. The latter can absorb income from other sources which may have been generated even before the taxpayer started crypto investments. One particular situation that tax systems should watch out for is the use of companies which have incurred a large amount of crypto losses (which are carried forward) to run otherwise profitable businesses and using the crypto losses to offset income from the businesses.

There are a range of possible safeguards which can be applied. For example, a "shareholding test" can be applied, requiring that the shareholders of the company remain

substantially the same on the last day of the year in which the loss was incurred and the first day of the year of assessment in which the loss would be deductible. Generally, this means that not less than 50 per cent of the total number of the issued shares of the company must be held by or on behalf of the same shareholders on both dates. There may also be caps on the amount of unabsorbed losses that can be shifted.[72]

Q4.	Does the existing tax system have any mechanisms for the group relief of losses? If so, are there any restrictions on these mechanisms?

Background and rationale

Many countries have the concept of a fiscal unity, where companies that are considered as sufficiently linked are treated as one entity. This can also be achieved through the granting of group relief, where losses may be transferred to and utilized by companies in a group that are related by substantially sharing the same shareholders. A company may join the group after the losses were incurred, raising the possibility of the potential "sale of losses", where a company may be purchased in order to utilize its losses. As this is a classic tax avoidance technique, many tax systems will already guard against this. In the absence of any safeguards, one might expect companies which have incurred considerable crypto losses to be acquired for the purpose of utilizing those losses.

As mentioned, many tax systems will already have some kind of safeguard against the sale of losses, for this is a classic tax avoidance technique. An example of a safeguard might be the need to establish that the two companies are members of the same group (for example, one company may need to own at least 75 per cent of the shares of the other company, or there has to be the same percentage of common ownership by a third company). There may also be a need to pro-rate the amount of losses that can be transferred based on the duration for which these conditions are met.[73]

Q5.	Are the safeguards of the existing tax system sufficient to manage the risk of crypto losses?

Background and rationale

Crypto losses are of particular concern because cryptoasset values are extremely volatile and can result in a large amount of losses being incurred in a very short span of time. Further, there is the possibility that such losses may be shifted around in a manner which a government may consider to be unfair. This may be where the losses are carried back (potentially offset against income generated even before any crypto activities took place), carried forward (potentially offset against income generated long after any crypto activities have ceased), or shifted to other companies (through

72 See Vincent Ooi, "The case for stronger scrutiny of the deductibility of crypto losses", *Journal of Tax Administration,* vol. 9, No. 1 (2024), pp. 50–65.

73 Ibid.

a process such as group or consortium relief). There is a need for jurisdictions to ensure that there are safeguards in place to protect the tax base at two levels: 1) the general deductibility of losses across different sources of income; and 2) the deductibility of losses through shifting mechanisms such as the carrying forward or back of losses and group relief.

A jurisdiction which allows for the shifting of losses may consider introducing tests (such as shareholding tests) to ensure that crypto losses cannot readily be sold or deducted against other sources of income that had nothing to do with the crypto source from which the losses were generated.

Risk 2.1.1: Losses from investment or speculation (non-business)

Many tax systems may distinguish between losses which are incurred in the course of a trade or business and those from general non-trade or business activities (such as investment or speculation). For such tax systems, there may be a more generous tax treatment for losses incurred in the course of a trade or business.

Refer to the losses questionnaire for the first five questions.

Please complete the five questions listed in the losses questionnaire above before proceeding with the following questions, as they are crucial for setting the necessary context for discussing the deduction of crypto losses.

Q1.	If the existing tax system does distinguish between a revenue (ordinary) or capital loss, what tests are applied to make this determination?

Background and rationale

The question of what legal tests a tax system applies to determine if a loss is revenue or capital in nature is likely to be a familiar question within the expertise of any tax administration. There may be a list of factors that may be indicative, such as whether the asset disposed of was a personal use asset, or whether the intention of the taxpayer was to make a profit. However, whether a loss is a capital or revenue loss is fact-intensive in each jurisdiction and requires detailed examination of the taxpayer's activities. Common tests that are applied are those to determine whether there is a trade or business (see the commentary for Risk 2.1.2: Losses from trading in cryptoassets). Losses arising from regular business operations are generally considered revenue losses, whereas losses from the sale or disposal of capital assets are typically considered capital losses.

Q2.	If the existing tax system does distinguish between losses by source of income, what tests are applied to determine if losses are from the same source?

Background and rationale

The tests to determine if losses are from the same source typically involve examining the nature of the income-generating activities or transactions in particular circumstances. Some jurisdictions may treat all losses flowing from the same broad business activity to

be from the same source, regardless of what particular kinds of businesses a taxpayer is engaged in. For example, a business selling shoes and one selling food may still be viewed as parts of the same source. Other jurisdictions may consider dividend income from Share A to be of a different source than Share B.

Q3.	Is the existing tax system likely to allow for crypto losses from investment or speculation to be generally deducted against income from other (non-crypto) sources?

Background and rationale

Crypto losses from investment or speculation are likely to be particularly objectionable from a policy perspective and jurisdictions may wish to be very cautious about allowing them to be freely deductible against income from other sources. As noted above, such losses are potentially large and volatile and there are fundamental questions on the fairness of allowing them to be deducted against other non-crypto income.

This assessment has to be made by considering how generous the rules for the deduction of the losses are in a tax system. As noted above, a system which applies a source-by-source matching of each loss with income from the same source is less likely to be at risk than one that generously allows losses from any source to be deducted against income from any other source.

Jurisdictions may wish to consider that for crypto losses from investment or speculation, any such deductions will have to be made under a strict source-by-source matching framework. As such, such crypto losses will only be deductible against income from other crypto sources and not non-crypto sources.

Risk 2.1.2: Losses from trading in cryptoassets

For many tax systems, there may be a more generous tax treatment for losses incurred in the course of a trade or business. This makes the tests for establishing a trade or business and attributing a loss to a trade or business important ones. In particular, as many tax systems provide that gambling will not be considered to be a trade or business except in very exceptional circumstances, the test for whether crypto dealing will be considered to be gambling is a very important one.

Refer to the losses questionnaire for the first five questions.

Please complete the five questions listed in the losses questionnaire above before proceeding with the following questions, as they are crucial for setting the necessary context for discussing the deduction of crypto losses.

Q1.	What test does the existing tax system apply to determine if there is a trade or business?

Background and rationale

In many Commonwealth jurisdictions, the badges of trade will generally be used to determine the existence of a trade of buying and selling of cryptoassets. The badges of trade are a set of indicia used as a guide in the determination of whether a taxpayer has engaged in a trade. The traditional six badges of trade laid out in the original report of the Royal Commission on the Taxation of Profits and Income are: 1) the subject matter of the realization; 2) the length of period of ownership; 3) the frequency or number of similar transactions by the same person; 4) supplementary work on or in connection with the property realized; 5) the circumstances that were responsible for the realization; and 6) motive. However, the set of indicia has never been thought to be exhaustive and some other indicia considered in later cases include: the 7) accounting treatment of assets; 8) objects in memorandum of association; 9) separate legal personality of company and lifting the corporate veil; 10) formation and/or winding up of the company; and 11) method of financing.[74]

To determine whether there is a business, the common law test is generally whether there is a wide group of activities that are not purely recreational, that are commercially undertaken and usually, but not necessarily, for profit, and whether this business is carried on in the sense of habitual and systematic operation, a continuity or repetition of acts or similar operations.

Q2.	Does the test to determine if there is a trade or business differ if cryptoassets or transactions are involved?

Background and rationale

Several indicia of the badges of trade will tend to present differently where cryptoassets are involved. Firstly, cryptoassets are not generally of a kind considered to be used for investment, but rather for trading. Secondly, the period of ownership to constitute a trade will generally be shorter. Thirdly, the frequency of trading might be greater for cryptoassets.

Further, due to the volatile nature of the value of cryptoassets, in some jurisdictions, the determination of whether there is a trade or business may have to take into consideration whether the taxpayer can be said to be engaging in gambling activities, as that may negate the finding of a trade or business.[75] Thus, in addition to the base tests for determining whether there is a trade or business, a further test must be applied, considering: 1) whether the outcome is affected by chance or skill; 2) the level of skill of the taxpayer; 3) the level of organization; and 4) the nature of the entity.[76] The net result is that it may be more difficult for dealings in cryptoassets to be found to constitute a trade or business. It is noted that the comparison of crypto transactions

74 See Keang Sood Teo, "Badges of trade revisited", *Singapore Journal of Legal Studies*, (1996), p. 43, as cited in Vincent Ooi, "The taxation of cryptocurrency gains", *Bulletin for International Taxation,* vol. 75, No. 7 (2021), pp. 323, 325.

75 Ibid., pp. 327–330.

76 Ibid.

to gambling may not be suitable for all jurisdictions depending on their domestic legislation.

Q3.	What are the tax implications of a finding that there is a trade or business?

Background and rationale

For many tax systems, there may be a more generous tax treatment for losses incurred in the course of a trade or business. For example, even if the tax system generally requires a matching of losses to income of the same general type, there tends to be an exception, where losses from trades or businesses can generally be set off against all other types of income.

Q4.	Are there any tax policy reasons for treating crypto-related trades or businesses differently from other traditional trades or businesses?

Background and rationale

As noted above, crypto losses are of particular concern because cryptoassets are extremely volatile and can result in a large amount of losses being incurred in a very short span of time. Further, there is the possibility that such losses may be shifted around in a manner which a government may consider to be distortionary.

The fact that dealings with cryptoassets are less likely to be considered capable of establishing a trade or business is in line with the policy decision to manage the risks of large crypto losses being deducted against other sources of income. In fact, for the most part, crypto losses are treated in a similar way to non-crypto losses. This does not reflect the higher risks of crypto losses to the tax system and further restrictions on the deductibility of crypto losses may be considered.

Countries may consider it beneficial to treat cryptoassets and transactions differently from their traditional counterparts for tax purposes due to certain policy reasons, such as the high volatility of cryptoasset values.

Risk 2.1.3: Losses from crypto dealings as part of a broader non-crypto business

In some cases, a taxpayer may deal with cryptoassets as part of a broader non-crypto business. In such cases, there may be a need for special rules to determine to what extent any crypto losses may reasonably be deductible against income from the broader business. Such situations should arguably be treated differently from those where a taxpayer deals in cryptoassets and nothing else as the risks to the taxpayer may be different.

Refer to the losses questionnaire for the first five questions.

Please complete the five questions listed in the losses questionnaire above before proceeding with the following questions, as they are crucial for setting the necessary context for discussing the deduction of crypto losses.

Q1.	Does the existing tax system prohibit the deduction of losses simply because they are linked to cryptoassets in any way?

Background and rationale

In jurisdictions where cryptoassets are completely banned, it is arguable that any losses from activities linked to cryptoassets in any way should not be deductible against income from other sources. However, in the absence of a ban on cryptoassets or other specific rules, the deduction of losses may be allowed even if they are linked to cryptoassets. This may pose significant risks to the tax base for the above-mentioned reasons. However, imposing a blanket ban on the deduction of losses merely because they are linked to cryptoassets may produce unintended consequences. In any case, it may be difficult to define the crucial term "linked to crypto-assets". Failing to do so may result in unexpected consequences. Consider, for example, scenarios where an individual works for a crypto company, receives cryptoassets as part of remuneration, or invests in a bank with exposure to crypto.

Q2.	Should the tax system prohibit the deduction of crypto losses against income unless they have a sufficient connection to the source of income?

Background and rationale

To safeguard and restrict the deduction of losses from trading in cryptoassets against income from other sources, a potential idea that the jurisdiction may consider is to restrict the deductibility of losses from one source against the income from another source unless both sources carry on a broadly similar trade or business or have some kind of nexus with each other. Another idea might be to enact legislation specifically dealing with crypto losses and restricting their deduction against other (non-crypto related) sources of income.[77]

Jurisdictions that decide to prohibit the deduction of losses have a variety of policy options available to them. One example is that the jurisdiction could list the specific crypto-linked activities where the deduction of losses is disallowed.

Rather than a blanket ban on deductions of losses merely because they are linked to cryptoassets, jurisdictions may wish to consider allowing deductions only if there is a sufficient nexus between a crypto-linked source and other non-crypto linked sources. They may also wish to consider prohibiting the deduction of losses from specific crypto-linked activities, such as speculation.

Risk 2.2: Donations

There has been an increasing number of donations made in cryptoassets and charities have also increasingly been prepared to accept donations in cryptoassets. However, there may be potential opportunities for tax avoidance or fraud due to the general dif-

77 See Ooi, "Report on the challenges which digital assets pose for tax systems with a special focus on developing countries" (see footnote 8), p. 22.

ficulties in valuing various kinds of cryptoassets. The closest analogies are probably with donations of artworks, given that these are donations in kind (rather than money) and may sometimes pose difficulties in determining the values of such gifts. Existing tax laws may not have expressly contemplated such donations, making it necessary to consider if they are fit for the purpose.

Donations questionnaire **(Preliminary questions for Risks 2.2.1–2.2.2)**

Given that Risks 2.2.1- 2.2.2 all concern the broad issue of the deduction of donations, there is a common set of questions - the donations questionnaire - that should be answered when considering any of those risks. These questions set the background for examining more specific situations when considering the various kinds of crypto donations later.

Donations and tax deductions	
Q1.	Does the tax system allow for tax deductions for donations in kind? If so, are donations of cryptoassets tax deductible?

Background and rationale

Donations-in-kind represent non-cash philanthropic contributions in the form of direct and indirect donations of products or services of all kinds.[78] While most tax systems will generally allow monetary donations to be tax deductible (sometimes offering additional incentives for such donations), not all tax systems will accord the same treatment to donations made in kind. It is not uncommon for a tax system to prescribe that even where donations-in-kind may be tax deductible, that the categories of such donations are restricted.

Jurisdictions should review their existing laws to determine whether donations of cryptoassets would be tax deductible. If the provisions are broadly drafted to include all types of in-kind donations, then donations of cryptoassets are likely to be included as well. It would be less clear if prescribed categories of goods or services are laid out in the legislation. Unless cryptoassets would be able to fit within existing categories, they would be unlikely to qualify for tax deductions when donated.

Valuation	
Q2.	Is there a framework or guidelines to value cryptoassets, and is it based on fair market value or another method?

78 Sandra Stötzer and Katharina Kaltenbrunner, "In-kind donations—peculiarities and challenges of product philanthropy", *International Review on Public and Nonprofit Marketing*, vol.21 (November 2023), pp. 395–414.

Background and rationale

As cryptoassets do not have the status of fiat currency in the vast majority of jurisdictions, any donations of cryptoassets are likely to be considered to be donations in-kind, making it necessary to fairly value these donations. Highly liquid cryptoassets such as bitcoin will probably not raise issues with regards to their valuation since there will be a readily ascertainable market value derived from the quoted prices on leading crypto exchanges.[79] Some tax authorities have indicated that they will generally accept valuations of tokens based on an exchange rate that is verifiable (i.e., listed on an established crypto exchange) and consistently applied.[80]

However, where the cryptoassets donated are not commonly traded and do not have readily-available values, it may be necessary to seek the opinion of professional valuers.[81] For instance, in the United States, if the donor is claiming a charitable contribution deduction for donations of cryptoassets totaling over US$5,000, additional appraisal requirements generally will apply.[82] In this case, a donor is required to obtain a qualified appraisal, which must be signed and dated by a qualified appraiser. The requirement to obtain a qualified appraisal may raise practical issues, since the IRS requires that the appraiser possess "verifiable education and experience in valuing the type of property being appraised."[83]

Jurisdictions may take as a starting point the prices listed on leading crypto exchanges and possibly accept the opinions of professional valuers in the absence of such information. However, it may also well decide to limit the tax deductibility of donations of cryptoassets to those which can readily be valued (see the commentary for Risks 2.2.1 and 2.2.2, below).

Deemed realization rule	
Q3.	Is there a deemed realization rule (assets are deemed to have been sold at a market value)?

Background and rationale

Where cryptoassets are donated and a tax deduction is allowed, the tax authorities should consider having rules in place under which the assets are deemed to have been

79 Ooi and Ritter, "Crypto assets: What issues do they pose for transfer pricing?" (see footnote 5), p. 208.

80 See IRS Virtual Currency Guidance Notice (see footnote 6); and Singapore, Inland Revenue Authority of Singapore, *IRAS e-Tax Guide: Income Tax Treatment of Digital Tokens* (9 October 2020), paras. 5.4–5.5.

81 See Ooi and Ritter, "Crypto assets: What issues do they pose for transfer pricing?", pp. 210–211.

82 Lisa Zarlenga and John Cobb, "Charitable contributions of cryptocurrency: Tax benefits and other considerations for donors and charities", Exempt Organizations Advisory, Steptoe Publications, 29 December 2020.

83 Ibid.

sold at market value. In such a case, the taxpayer would be able to claim the market value of the cryptoasset as a deduction when the asset is donated, but must also pay tax based on the deemed appreciation of the value of the asset since they acquired it. To do otherwise would risk an argument by taxpayers that there is no "realization event" and that they are not liable to tax on their gains from the assets, which means being able to deduct the full value of the assets through their donations. The United States has taken a different position. While it does not have a deemed realization rule in this context, it will only allow taxpayers to claim a deduction on their charitable donations equivalent to what the donor has paid for the cryptoasset in some situations.[84]

As noted above, there are two main policy choices available to jurisdictions. They can have a deemed realization rule or only allow taxpayers to deduct the acquisition cost of the cryptoasset which they have donated. To allow for the deduction of the full market value but not tax the appreciation of the value of the asset may be generous to taxpayers.

Risk 2.2.1: Donations of payment tokens

Refer to the donations questionnaire for the first three questions.

Please complete the six questions listed in the donations questionnaire above before proceeding with the following questions, as they are crucial for setting the necessary context for discussing the deduction of crypto donations.

Policy considerations	
Q1.	Does the existing tax system distinguish between donations of payment tokens and non-payment tokens?

Background and rationale

Donations of payment tokens are more likely to be akin to fiat currencies, and thus, the case for treating donations of payment tokens as such is stronger. They are far more likely to have readily ascertainable values on leading crypto exchanges rather than, for example, utility tokens.

Most tax systems do not currently distinguish between donations of payment tokens and non-payment tokens at the moment. It is arguable that tax authorities should instead scrutinize donations of non-payment tokens much more carefully, even if the technical treatment of both might be the same.

Q2.	Does the existing tax system distinguish between donations of less frequently traded payment tokens and actively traded payment tokens?

84 See Q35, US IRS Frequently asked questions on virtual currency transactions, available at the IRS website (https://www.irs.gov/) (accessed on 24 October 2024).

Background and rationale

Frequently traded cryptoassets like bitcoin, Ethereum, and others have a readily ascertainable market value because they are frequently traded on various exchanges, and their prices are updated in real time.[85] This high liquidity and volume provide a clear and immediate picture of what the market is willing to pay for these assets at any given time. However, this may not necessarily be the case for less-frequently traded payment tokens. These less-liquid assets, often associated with newer or smaller projects, may not be listed on major exchanges, or they may have low trading volumes. This can make it difficult to determine a fair market value for these assets, as there may not be enough recent transaction data to reference.

Again, most tax systems do not currently distinguish between donations of less-frequently traded payment tokens and actively traded payment tokens. Tax authorities may consider scrutinizing donations of the former much more carefully, rather than draw a legal difference between the two.

Risk 2.2.2: Donations of non-payment tokens

Refer to the donations questionnaire for the first three questions.

Please complete the six questions listed in the donations questionnaire above before proceeding with the following questions, as they are crucial for setting the necessary context for discussing the deduction of crypto donations.

Policy Considerations	
Q1.	Are donations of non-payment tokens tax deductible in the jurisdiction?

Background and rationale

The preliminary question to be asked is whether non-payment tokens are suitable for charitable contributions. This is due to the fact that, typically, only those cryptocurrencies that are convertible into a fiat currency are of value to charities. Those charities that are able to accept cryptocurrency generally convert crypto to fiat currency as soon as possible.[86] Notably, assets which are non-convertible into currency, may present challenges for charities to liquidate, and thus, may not be accepted by the charitable organizations. Further, donations of non-payment tokens are likely to be more difficult to accurately value and a policy decision will have to be made as to whether tax deductions should be granted in the first place.

Whether to allow donations of non-payment tokens to be tax deductible is a policy decision by each jurisdiction that should take into account whether it is worth

85 For example, CoinDesk, "Ethereum price page", available at https://www.coindesk.com/price/ethereum/ (accessed on 24 October 2024); Bitcoin.com, "Ethereum price page", available at https://markets.bitcoin.com/crypto/ETH (accessed on 24 October 2024).

86 Andrea Kramer, "A Primer on charitable contributions of virtual currency", McDermott Will & Emery Special Report, 14 May 2021.

the additional risks of tax avoidance and evasion and the administrative burden of ensuring that reports by professional valuers are credible. Jurisdictions which may not have extensive resources to do this should consider only allowing donations of payment tokens to be deductible.

Risk 3: Crypto functional substitutes risks

Risk 3.1: Issues of source and situs

The concepts of source and situs are fundamental in determining a jurisdiction's right to tax income or assets. "Source" refers to where the income is generated, while "situs" pertains to the location of an asset for tax purposes. The nature of cryptoassets challenges the conventional application of source and situs rules, as cryptoassets can facilitate transactions that generate income outside the purview of existing tax regulations. This creates significant risks for tax systems as regulatory gaps can lead to substantial revenue losses.

The concepts of source and situs are vital in territorial tax systems, which tax income deemed to come from a source inside a jurisdiction. As a result, accurately determining the source of income derived from transactions involving cryptoassets or the situs of cryptoassets dictates whether a subject is liable for taxation. Without clear definitions, there is a risk that income or assets could escape taxation entirely, leading to potential revenue losses.

Moreover, it is important to note that countries with worldwide tax systems, which tax their residents' income and gains regardless of the income's source or the asset's situs, can still encounter situations where identifying these elements is relevant. Many jurisdictions that have a worldwide tax system differentiate between income generated abroad and income earned domestically, applying different rates, exemptions, or providing special rules for foreign tax credits. This makes the determination of the income's source essential.

Understanding how the current tax system handles source and situs issues related to cryptoassets is crucial for developing countries to safeguard their tax bases, ensure equitable tax compliance, and mitigate the risk of revenue losses associated with cryptoasset transactions.

Source and situs questionnaire

(Preliminary questions for Risks 3.1.1–3.1.3)

Given that Risks 3.1.1–3.1.3 all concern the broad issue of the application of source and situs rules in different circumstances, there is a common set of questions - the source and situs questionnaire - that should be answered when considering any of those risks. These questions form the background for examining more specific situations when considering the various crypto tax risks later.

Q1.	How do source rules apply to transactions involving assets without physical presence or physical location? Are there specific tax rules addressing these issues?

Background and rationale

Source rules are designed to allocate income to a jurisdiction by defining the factual conditions that determine when income arises within that jurisdiction.[87] Typically, these rules are based on physical presence, location of activities, or place of economic benefit. These rules are crucial for a jurisdiction to establish the necessary nexus that determines its right to tax income. This is especially important for cross-border transactions.

However, applying these rules to transactions involving assets that lack a physical presence or specific geographic location, such as intellectual property rights, or digital goods, is challenging. Intangible assets often derive value from ideas, inventions, legal rights or contracts, making it difficult to determine a clear geographic source. To address this complexity, jurisdictions have developed specialized source rules tailored to transactions with intangible assets, considering factors like the location of the payor, the place where the intangible is exploited economically, the jurisdiction where the legal rights are registered, or the place where the service related to the intangible takes place. These rules often vary significantly between jurisdictions, reflecting different approaches.

As cryptoassets operate on decentralized networks that span multiple jurisdictions simultaneously without a central authority or physical location, the application of source rules for intangible assets to cryptoassets is challenging. In fact, cryptoassets' decentralized nature can lead to transactions that generate income outside the scope of existing tax regulations.

Therefore, it is essential to first understand how current source rules apply to transactions involving assets without physical presence or location, which involves assessing whether specific rules are in place to address these issues. This foundational knowledge is crucial to then identify potential loopholes that could be exploited for tax arbitrage through the use of cryptoassets. Such an understanding is necessary to effectively address the subsequent questions.

One practical approach is to structure source rules so as to link them to the classification of the digital asset (as property, intangibles, etc.) and the nature of the income derived from the transaction. For example, in the United States, the IRS has classified virtual currencies as "property" under which the disposition of such an asset would constitute income from capital gains (sourced based on the residence of the seller).[88]

87 Mitchell A. Kane, "A defense of source rules in international taxation", *Yale Journal on Regulation,* vol. 32 (2015), p. 317.

88 US IRS Frequently asked questions on virtual currency transactions (see footnote 84).

Q2.	Does the current tax system consider the situs of assets to determine the presence of taxable income or capital gains? If so, does this consideration extend to assets without a specific geographic location?

Background and rationale

The situs of an asset refers to its location for tax purposes. Jurisdictions use this concept to establish the nexus that justifies taxing the income or gains derived from an asset. For immovable property, the situs is easy to determine as it is tied to a specific geographic location.

However, for assets without a tangible presence nor fixed geographic location, such as intangible or digital assets, determining the situs can be significantly more complex. The lack of physical presence complicates the administration of taxes and enforcement. In these cases, jurisdictions consider various factors to establish the situs, such as the location of the registry, the residence of the owner, or the place where the asset was created.

Tax authorities in countries that have developed criteria for establishing the situs of non-geographic assets must thoroughly understand their underlying legal framework, including its structure, functionality, scope and potential limitations, and evaluate whether they are applied effectively in practice. This is essential for analyzing how these principles can apply to cryptoassets, which will be explored in subsequent questions.

Q3.	Does the current tax system establish different treatments for income generated abroad or within the jurisdiction?

Background and rationale

Tax systems frequently distinguish between income generated within a jurisdiction (domestic income) and income generated outside of it (foreign income). This distinction is fundamental in determining how income is taxed, particularly for cross-border transactions.

The treatment of domestic and foreign income can vary significantly, with regard to tax rates, exemptions, deductions and the application of foreign tax credits. For instance, some jurisdictions may offer exemptions or lower tax rates on foreign income, or they may provide credits for taxes paid in other countries to mitigate the risk of double taxation. On the other hand, income earned within the jurisdiction is typically subject to standard tax rates and rules. These distinctions are made to address various policy objectives, such as encouraging foreign investment, maintaining competitiveness and managing the domestic tax base.

However, in the context of digital transactions, the line between domestic and foreign income can become blurred. The decentralized nature of cryptoassets, in particular, challenges the conventional classification of income as either domestic or foreign.

This ambiguity can lead to uncertainty in tax treatment, creating potential tax base erosion risks if income is incorrectly classified.

For tax officials, understanding how the tax system differentiates between foreign and domestic income is crucial for recognizing potential risks. If cryptoasset income is classified as foreign, it may face lower tax rates or exemptions, encouraging tax avoidance strategies. This question seeks to identify whether such distinctions exist and how they are structured, to assess the risks of tax arbitrage.

Risk 3.1.1: Determining source for decentralized transactions

Decentralized transactions refer to those peer-to-peer exchanges that occur without a central authority or intermediary.[89] The lack of a central regulatory authority complicates the determination of the source of income, as it is challenging to pinpoint where economic activities take place through digital means. The following questions explore how current tax rules address the source of income in decentralized transactions and how these rules are applied to transactions involving cryptoassets.

Refer to the source and situs questionnaire for the first three questions.

Please complete the four questions listed in the source and situs questionnaire above before proceeding with the following questions, to provide the necessary context for discussing the determination of the source for decentralized transactions.

Q1.	Are there specific tax rules to determine the source of decentralized transactions involving cryptoassets?

Background and rationale

When it comes to decentralized transactions involving cryptoassets, conventional criteria for determining the source of income become difficult to apply. One of the most problematic aspects is the absence of a clear nexus. In a typical transaction, the source might be tied to the location of the business operations, the residence of the parties involved, or where services are rendered. In contrast, decentralized transactions often occur on blockchain networks that are distributed across the globe. Additionally, the pseudonymity of cryptoasset owners further complicates the ability to trace the origin of the income.

If a jurisdiction has established specific rules to determine the source of decentralized transactions involving cryptoassets, it is essential to evaluate whether these rules effectively address the complexities outlined above. The effectiveness of these rules hinges on their ability to account for the decentralized nature of the transactions, the global reach of the networks involved and the pseudonymity of the participants.

89 Pankaj Bhambri, "Wallets and transactions", in '*Decentralizing the Online Experience with Web3 Technologies*, Dina Darwish, ed. (Hershey, PA, IGI Global Scientific Publishing, 2024).

Without robust and clear guidelines, there is a risk that these rules may fail to capture the true source of income, leading to misclassification of income or tax base erosion.

Q2.	In the absence of specific legislation, can existing source rules for transactions involving assets without physical presence be effectively applied to transactions involving cryptoassets?

Background and rationale

In the absence of specific legislation for cryptoassets, it is critical to consider the applicability of existing tax rules to these assets. This involves assessing whether the current definitions and criteria used for determining the source of income in transactions involving intangibles are flexible and robust enough to encompass the unique nature of cryptoassets.

However, attempts to apply existing source rules to these transactions are likely to encounter significant challenges. For example, if a tax system uses the location of a transaction's execution, i.e., the point at which a transaction is considered to be completed, as the basis for determining the source, this approach fails to capture the nuances of decentralized transactions, where execution is spread across a global network. Similarly, rules that rely on the location of the asset itself may have limited applicability when dealing with assets that exist solely in digital form. The lack of a clear guidance could lead to varied interpretations by taxpayers and tax administrators alike, increasing the potential for disputes and inconsistent tax outcomes. These differences in interpretation create opportunities for tax arbitrage, where taxpayers exploit the lack of clarity to minimize their tax liabilities.

Given these challenges, it is essential to identify and understand existing limitations. This will help tax authorities pinpoint where gaps exist and where additional regulatory clarity might be necessary.

Risk 3.1.2: Determining situs for decentralized assets

Determining the situs or legal location of assets, like cryptoassets, poses significant challenges for tax authorities. Situs refers to the place where property is considered to be located for tax purposes, which is crucial in establishing taxing rights. Traditional assets typically have a clear geographical or legal presence, making it easier to apply tax rules. However, cryptoassets blur these boundaries, complicating the task of defining where these assets are situated for taxation purposes.

Refer to the source and situs questionnaire for the first three questions.

Please complete the four questions listed in the source and situs questionnaire above before proceeding with the following questions, as they are crucial for setting the necessary context for discussing the determination of the situs for decentralized assets.

Q1.	Are there specific tax rules to determine the situs of decentralized cryptoassets?

Background and rationale

Cryptoassets exist on distributed ledger technology, such as blockchain, which operates across a global network of computers. One of the most challenging aspects of determining the situs for cryptoassets is the absence of a physical or central reference point. Traditional rules for establishing situs rely on factors such as the location of the asset, the place of the transaction, or the residence of the owner. However, in the case of cryptoassets, these traditional factors are often irrelevant. For instance, a cryptoasset can be transferred instantly across borders, and its ownership can be anonymized.

If a jurisdiction has established specific rules to determine the situs of decentralized cryptoassets, it is crucial to evaluate whether these rules effectively address the complexities associated with these assets. The effectiveness of these rules depends on their ability to account for, among other factors, the decentralized nature of cryptoassets and the potential for pseudonymity of ownership.

Q2.	In the absence of specific legislation, can existing situs rules applicable to assets without physical presence apply to cryptoassets?

Background and rationale

Building on the previous discussion, this question delves into the practical applicability of existing situs rules, particularly those related to intangible assets, such as cryptoassets. Traditional situs rules for intangibles often rely on criteria such as the location of the registry, the place where the rights to the asset are exercised, the residence of the owner, or where the economic benefits are realized. These criteria work reasonably well for assets like intellectual property, where there is a clear legal framework, a central registry, or a defined point of economic activity. However, cryptoassets pose significant challenges to these existing approaches.

For example, the situs of intellectual property might be determined by the jurisdiction where the patent is registered, or where the rights are enforced. Similarly, the situs of a digital service could be tied to the location of the servers or the place where the service is provided. However, cryptoassets are typically stored and transacted on blockchain networks and held in digital wallets that are decentralized and distributed across multiple jurisdictions. There is no single registry or central authority, and the asset itself does not reside in any specific location. The ownership of cryptoassets is pseudonymized, further complicating the determination of situs.

Possible situs rules could be the tax residence of the holder of the cryptoassets, the location of the underlying asset the cryptoasset represents (in DeFi), the location of the (majority of the) nodes of the networks or the place where the private key to any crypto wallet is generated/issued.

The digital wallets in which cryptoassets are held could also be used as an indication of situs, but given their digital nature, it is likewise unclear where wallets are located, i.e., location of server, location of the wallet owner, or legal seat of the company providing wallet technology. An alternative could be the "hard wallet" as a potential situs. A hard wallet is a piece of physical technology (for example resembling a USB drive) that securely guards a crypto user's cryptographic keys in offline mode, ready to be used online for accessing the digital wallet to complete a crypto transaction. Hard wallets do not contain the cryptocurrency itself, rather, it is a physical device that allows access to the digital assets. The physical location of the hard wallets could serve as an alternative legal fiction for determining situs and source.[90]

An alternative approach would be to require certain provisions in contracts or user agreements of digital wallets that would pre-determine where situs is held.

It is expected, therefore, that attempts to apply existing situs rules to these transactions will encounter significant challenges. Tax officials should explore whether existing criteria for determining situs can be effectively adapted to cryptoassets or whether extensive legal modifications and the development of new rules specifically tailored to these digital assets are necessary. Addressing this question is crucial for identifying specific aspects of the existing framework that may require adjustment to better align with the decentralized nature of cryptoassets.

Risk 3.1.3: Decentralized Autonomous Organizations

Decentralized Autonomous Organizations (DAO) represent a novel organizational structure that, using blockchain technology, operates without centralized leadership. DAOs function through smart contracts, which are self-executing agreements with the terms of the contract directly written into code (further information can be found in appendix I.c). The decentralized nature of DAOs challenges traditional legal and regulatory frameworks. Unlike traditional companies or organizations that have clear legal status and personality, DAOs exist in a more ambiguous legal space. This lack of clarity raises important questions about how transactions on DAOs should be regulated, recognized and taxed under existing legal frameworks.

Refer to the source and situs questionnaire for the first three questions.

Please complete the four questions listed in the source and situs questionnaire above before proceeding with the following questions, as they set the necessary context for discussing the determination of the source of transactions within DAOs.

Q1.	Are decentralized autonomous organizations (DAO) regulated under the current tax legal framework? If so, what is their legal status? Do they have legal personality?

90 Coinbase, "What is a hardware wallet?", (n.d.), (accessed 24 October 2024).

Background and rationale

The decentralized nature of DAOs challenges traditional legal and regulatory frameworks. Unlike traditional companies or organizations that have clear legal status and personality, DAOs exist in a more uncertain legal space. This lack of clarity raises important questions about how DAOs should be regulated, recognized and taxed under existing legal frameworks.

The legal recognition and regulation of DAOs vary significantly across jurisdictions, with some countries beginning to establish specific legal frameworks while others rely on existing laws for companies and organizations. For instance, Wyoming in the United States has pioneered the legal recognition of DAOs by classifying them as a form of limited liability company (LLC), thus granting them legal status and personality. This recognition allows DAOs to function with certain rights and responsibilities similar to those of traditional businesses, facilitating clearer tax obligations and regulatory compliance. However, in most jurisdictions, DAOs aren't covered by specific recognition or regulation, complicating the application of existing tax laws. This lack of regulation and legal status can lead to significant challenges in determining how DAOs should be taxed and what legal obligations they must fulfill.

It is essential to understand whether and how DAOs are regulated under the current tax legal framework and to ascertain their legal status and personality. Understanding the tax implications for DAOs is critical for ensuring that economic activities conducted through these organizations are appropriately taxed. If DAOs have legal personality, they can be treated similarly to traditional companies for tax purposes, which simplifies the application of tax rules. However, if they lack legal recognition, tax authorities may need to develop new frameworks or adapt existing ones to effectively tax the economic activities of DAOs.

Q2.	In the absence of specific legislation, could a DAO be categorized under an existing legal structure within the current legal framework? If so, how would its tax residency be determined?

Background and rationale

The legal classification of DAOs presents a significant challenge for tax authorities. In the absence of specific legislation governing DAOs, tax officials may attempt to categorize them under existing legal frameworks, such as partnerships, corporations, hybrids, or other structures. Each of these classifications carries distinct implications for tax treatment, including how income is recognized, the applicable tax rates, the allocation of liabilities and the determination of the DAO's tax residency. Tax residency, in particular, is critical for defining the jurisdiction in which income derived from DAO activities is taxable. Therefore, understanding whether current legislation is sufficiently flexible to encompass DAOs is crucial for effective taxation and regulation.

If, after evaluation, it is determined that DAOs cannot be categorized under any existing legal structure, they risk falling completely outside the scope of the current

tax system. Alternatively, even if a DAO is classified under an existing structure, the inability to establish a clear nexus for tax residency could result in significant enforcement challenges. These scenarios underscore the need to assess whether current legislation is adequate and, if not, to identify gaps that require attention. Such an evaluation will directly influence the capacity of tax authorities to address risks associated with income generation and compliance, ensuring DAOs are neither excluded from taxation nor unfairly advantaged over traditional organizations.

Q3.	How are transactions with cryptoassets in a DAO recognized and regulated under the current tax system? In the absence of specific law, how is the source of the income derived from such transactions determined?

Background and rationale

The recognition and regulation of transactions with cryptoassets in a DAO presents complex challenges. Cryptoassets are often used within DAOs for various purposes such as governance, funding and rewarding participants. In jurisdictions with established regulations for cryptoassets, these transactions are typically subject to tax laws similar to those governing other financial instruments. However, the nature of DAOs complicates the tracing and reporting of these crypto transactions, making enforcement difficult.

In the absence of specific regulations for DAOs, the current tax system may rely on existing frameworks for traditional assets and organizations. Tax authorities might apply general principles of taxation, such as determining the source of income based on the location of the transaction or the residence of the participants involved. This approach, however, is fraught with difficulties due to the borderless operation of DAOs and the use of blockchain technology, which does not confine transactions to a single geographic location. Consequently, determining the source of income from cryptoasset transactions in a DAO becomes a complex task that requires innovative solutions and potentially new regulatory frameworks.

Exploring how transactions with cryptoassets in a DAO are recognized and regulated under the current tax system is important to identify and acknowledge the significant gaps and uncertainties that exist in this area. Accurately determining the source of income derived from transactions is crucial for ensuring that all taxable activities are captured.

Risk 3.2: Financial markets and instruments

To ensure the taxation of transactions involving financial instruments, tax systems typically implement mechanisms to regulate and distinguish between different types of financial instruments and transactions within financial markets. These mechanisms often include highly specific tax rules designed to address the unique characteristics of financial instruments and the ease with which they can be manipulated to artificially reduce income or generate artificial tax losses.

It is crucial to have clear definitions of what constitutes a financial instrument or financial market for tax purposes, as these definitions delineate the scope of

legislation and define the applicable tax consequences. Assuming that a cryptoasset is functionally equivalent to a traditional financial instrument does not guarantee that it will receive the same tax treatment under the current system. If existing legislation is not broad enough to cover transactions with cryptoassets, there is a significant risk that income or gains arising from these transactions could escape taxation.

Financial questionnaire **(Preliminary questions for Risks 3.2.1–3.2.9)**

Given that Risks 3.2.1–3.2.9 all concern the broad issue of regulating and taxing financial instruments and markets, there is a common set of questions — the financial questionnaire - that should be answered when considering any of those risks. These questions set the background for examining more specific situations when considering the various crypto tax risks later.

Q1.	How are financial instruments regulated under the current tax system?

Background and rationale

When designing tax policies for financial instruments, it is essential to have a clear understanding of the nature of these instruments and the intended outcomes of legislation. Financial instruments, which encompass a wide range of types, have distinct characteristics and purposes. These instruments can be used for investment, hedging, speculation and risk management, each with unique implications for tax policy.

Policymakers adopt various approaches to regulate financial instruments, each tailored to achieve specific policy objectives. For instance, legislation might incentivize long-term investment over short-term speculation, or promote the use of specific markets or instruments. Implementing anti-abuse rules, reporting requirements and compliance measures are also crucial to enhance transparency and address tax evasion.

Due to the complexity of transactions with financial instruments, legislative designs can vary significantly. Some countries may establish specific rules applicable to certain financial instruments, taking into account their unique characteristics. Other approaches might consider designing comprehensive frameworks that integrate a robust set of norms, including anti-abuse rules to prevent exploitation of tax loopholes.

Understanding how financial instruments are regulated for tax purposes is the first step in comprehending how cryptoassets fit into the existing tax system. This is essential to see potential gaps and areas for improvement when dealing with cryptoassets and to assess whether their current tax system is equipped to handle the complexities introduced by cryptoassets.

Q2.	Does the current tax legislation contain specific definitions for financial instruments? How are these established (e.g., through a general definition, a closed list of instruments, or an open list)?

Background and rationale

The way financial instruments are defined for tax purposes plays a critical role in how they are treated under the tax system. Regardless of how tax rules on financial instruments are structured, the definitions provided in such rules are crucial for determining the applicable tax treatment. Furthermore, precise definitions help to avoid ambiguities that could lead to tax disputes or exploitation of loopholes. Additionally, well-crafted definitions can adapt to evolving realities without compromising the stability of the tax system.

Definitions can be established in various ways, such as through a general definition, a closed list of instruments, or an open list. Each approach has its advantages and challenges. A general definition provides flexibility and can adapt to new types of financial instruments as they emerge. However, this may also lead to ambiguities and inconsistent interpretations. A closed list offers clarity and certainty, as it explicitly enumerates all the financial instruments covered by the tax law. This approach ensures that taxpayers and tax authorities clearly understand which instruments are subject to taxation. However, this approach may struggle to keep up with financial innovation, requiring frequent updates to include new instruments. An open list combines elements of both the general definition and the closed list, providing a base list of instruments with the flexibility to include others that meet certain criteria. Nevertheless, this approach still requires careful management to ensure clarity and comprehensiveness.

If cryptoassets that function similarly to traditional financial instruments are not explicitly included or covered by the existing definitions, there is a significant risk that they could be overlooked within the current tax framework. This oversight could lead to inconsistent tax treatment, where similar financial activities are taxed differently depending on whether they involve traditional instruments or cryptoassets. Such inconsistencies may create opportunities for tax avoidance.

Q3.	Are financial market instruments covered by the existing tax system? If so, are cryptoassets in their scope?

Background and rationale

Many countries establish specific legislation under their existing tax system to ensure that transactions conducted through these markets are taxed appropriately. This responds to the significant tax implications of transactions conducted within these markets. Financial markets facilitate the exchange of capital and risk and can significantly impact national economy. Therefore, ensuring proper taxation and oversight of these transactions is critical to maintaining market integrity and government revenue. These regulations may encompass reporting requirements, transaction taxes, anti-fraud measures and compliance standards.

Assessing the extent and nature of current market regulations is essential for identifying gaps where cryptoassets might evade taxation. Cryptoassets often operate in parallel markets, such as on cryptocurrency exchanges and decentralized finance

platforms, which may not be covered by existing regulations. Evaluating how financial markets are currently regulated for tax purposes is crucial, as it helps determine whether this regulatory framework is robust enough to encompass cryptoasset markets.

Most countries do not have explicit regulations for cryptoasset markets, but depending on how their legislation on taxing financial transactions is crafted, some transactions may be covered or covered to a certain extent. Therefore, it is essential to evaluate whether the current regulatory framework for financial markets adequately encompasses transactions with cryptoassets. This evaluation helps determine if the existing tax system can effectively address the unique risks posed by cryptoassets and ensure they are subject to appropriate regulatory scrutiny. If transactions with cryptoassets are not explicitly included within the tax framework, this may lead to substantial revenue losses.

Q4.	Are there specific rules in the tax system to prevent manipulation through financial instruments or markets? Are reporting and documentation requirements in place (e.g., tax returns, informational returns, financial institution reporting)?

Background and rationale

Tax systems often include a variety of rules and mechanisms designed to prevent the manipulation of financial instruments for the purpose of tax avoidance. These rules may include anti-avoidance provisions, specific regulations for the treatment of debt versus equity, among others. However, the effectiveness of these rules is closely tied to the comprehensiveness of the reporting and documentation requirements that support them.

Given the relevance and complexities of transactions with financial instruments or those conducted within financial markets, financial transactions involving traditional instruments are subject to rigorous reporting and documentation requirements in many jurisdictions. These may include detailed disclosures in tax returns, the filing of informational returns by financial institutions and other regulatory reporting requirements. These mechanisms not only provide tax authorities with the information they need to monitor compliance and detect potential tax avoidance schemes but also act as a deterrent against manipulation by increasing the transparency of financial transactions.

However, with the advent of cryptoassets, new challenges arise. These assets can be structured in ways that mimic traditional financial instruments, yet they may not be subject to the same reporting and documentation requirements. Similarly, the decentralized nature of many cryptoassets could make it difficult for tax authorities to monitor transactions, particularly if they fall outside the scope of existing reporting frameworks.

It is important, therefore, to analyse whether the current tax system's anti-avoidance rules, reporting and documentation requirements are adequate to capture

transactions involving cryptoassets, or whether existing gaps could allow these assets to be used to circumvent existing anti-avoidance rules. If cryptoassets are not adequately covered, there is a risk that they could be used to engage in tax base erosion.

Risk 3.2.1: Equity instruments

The rise of cryptoassets that function similarly to traditional equity instruments presents a significant challenge for existing tax frameworks. Traditional tax systems often impose taxes on capital gains and dividends arising from equity instruments, relying on well-defined terms like "shares". However, as some cryptoassets can function as representing ownership in business or companies, generating capital gains or dividend-like payments, the sufficiency of current legislation to encompass these situations must be examined. For tax systems to effectively capture and tax these transactions, it is crucial to ensure that cryptoassets do not escape taxation due to narrowly written or outdated legislation.

Refer to the financial questionnaire for the first four questions.

Please complete the four questions listed in the financial questionnaire above before proceeding with the following questions, as they are crucial for setting the necessary context for discussing the taxation of cryptoassets functioning as equity instruments.

Q1.	What are the current criteria to define an equity instrument for tax purposes? Are cryptoassets functioning as equity instruments explicitly included or excluded? Could these meet existing definitions?

Background and rationale

Traditional equity instruments, such as shares, have generally long been defined within tax systems, and usually, clear tax treatments have been established for them. Cryptoassets that mimic these functions challenge the sufficiency of these definitions. If equity instruments, such as shares, or similar legal terminology used in tax legislation are too narrowly defined, they may fail to encompass cryptoassets that, despite their digital nature, serve the same economic purpose as traditional equity instruments. This gap could result in significant tax revenue losses, as transactions involving these digital assets may not be taxed appropriately, leading to potential disparities in how different types of equity are treated.

Furthermore, the tax implications of specific corporate actions involving equity instruments, such as share buybacks or splits, become more complex when cryptoassets are involved. These actions traditionally have clear tax consequences; however, when cryptoassets that act as equity instruments are subjected to these same actions, the tax consequences may not be as straightforward. The digital and decentralized nature of cryptoassets introduces new variables that existing tax frameworks might not be fully equipped to handle.

If cryptoassets functioning as equity instruments are explicitly included in the current tax legislation, it is important to understand how they have been incorporated

and what specific elements have been regulated. Specific rules regarding the taxable event, valuation and reporting of these digital instruments can help to ensure that they are treated similarly to traditional equity instruments.

On the other hand, if cryptoassets are explicitly excluded from the current definitions of equity instruments, it is essential to examine the rationale behind this exclusion. This could be due to the perceived differences between digital and traditional equity instruments, or because tax authorities may have determined that existing frameworks are not yet equipped to handle the complexities introduced by cryptoassets.

The ability of tax systems to adapt to cryptoassets is crucial for maintaining fairness and efficiency in the taxation of equity instruments. If cryptoassets are not adequately incorporated into existing definitions and frameworks, there is a risk that they could undermine the integrity of the tax system. Tax authorities should therefore ensure that their legislation is robust enough to include these digital instruments and that the mechanisms for monitoring and taxing traditional equity instruments can be effectively applied to cryptoassets.

Q2.	In case there is no specific regulation, would gains derived from the sale of cryptoassets functioning as equity instruments be taxed under current legislation?

Background and rationale

Traditionally, capital gains derived from the sale of equity instruments, such as shares, fall under capital gains tax regulations. Legislation typically specifies what constitutes a taxable capital gain and provide clear guidelines for reporting and paying taxes on such gains. However, not recognizing cryptoassets explicitly as equity instruments under current legislation raises important questions about whether these gains would be captured by existing tax frameworks.

In the absence of specific regulations addressing cryptoassets, there is a risk that capital gains derived from the sale of these digital assets could fall outside the scope of current tax laws. This gap may arise if the legislation is narrowly focused on traditional financial instruments, such as shares, and does not encompass the unique characteristics of cryptoassets. If tax laws rely solely on the definition of shares or similar terms, they may not automatically apply to cryptoassets that perform similar economic functions but are structured differently.

It is crucial, therefore, to examine whether current tax legislation is robust enough to capture capital gains from the sale of cryptoassets functioning as equity instruments, even in the absence of specific regulation. If existing laws do not adequately cover these assets, there could be significant revenue losses and disparities in the tax treatment of different types of financial instruments. This analysis is essential for identifying potential gaps in the tax system and for understanding whether legislative updates are needed to ensure that all forms of equity, including those in digital form, are appropriately taxed.

Q3.	In the absence of specific regulation, would distributions similar to dividends derived from cryptoassets functioning as equity instruments be taxed under current legislation?

Background and rationale

Dividends, i.e., a distribution of a company's profits to its shareholders, are a well-established concept in traditional equity instruments and are typically subject to clear taxation rules. However, cryptoassets that function as equity instruments complicates this framework. These digital assets can generate income that is economically similar to dividends, but without specific regulation, it is unclear whether existing tax legislation would apply to these distributions. If cryptoassets are not explicitly included in the tax definitions of equity instruments, there is a risk that these dividend-like distributions could escape taxation, leading to inconsistencies in tax treatment and potential revenue losses.

Assessing whether current tax laws are sufficient to capture and tax dividend-like distributions from cryptoassets is crucial. Without clear guidance, there is a possibility of significant gaps in the tax system, where income generated by these digital assets could be treated differently from traditional dividends. This assessment helps ensure that the tax system remains equitable and capable of addressing the evolving landscape of financial instruments, including the growing role of cryptoassets.

Risk 3.2.2: Debt instruments

Traditional debt instruments are well understood and regulated within existing tax frameworks. However, cryptoassets introduce significant risks when they function as debt instruments. A critical issue is whether current definitions within the tax legislation are broad enough to encompass cryptoassets that serve this function, which has direct implications for the taxation of interest payments. If cryptoassets are not clearly defined or recognized as debt instruments, this could lead to gaps in the taxation of interest, inconsistencies in the treatment of loans involving these assets and potential avenues for tax avoidance. This section explores the specific challenges and risks associated with the use of cryptoassets as functional substitutes for traditional debt instruments.

Refer to the financial questionnaire for the first four questions.

Please complete the four questions listed in the financial questionnaire above before proceeding with the following questions, as they are crucial for setting the necessary context for discussing the taxation of cryptoassets functioning as debt instruments.

Q1.	How does the current tax legislation define a "debt instrument", and does this definition encompass cryptoassets?

Background and rationale

Understanding how tax legislation defines a "debt instrument" is critical in evaluating the tax implications of loans involving cryptoassets. Traditional debt instruments typically involve loans of fiat currency or securities, and tax laws are generally designed with these conventional forms in mind. This raises the question of whether current legislative definitions are sufficiently broad to encompass newer, non-traditional assets like cryptoassets.

One of the key risks in this context is whether existing tax laws are limited to loans involving fiat currency or whether they are flexible enough to capture a broader range of assets. Two distinct scenarios are worth considering: (1) when a cryptoasset itself functions as a debt instrument, such as a token that represents an obligation to repay a specific amount in the future and (2) when cryptoassets are lent, creating a debt relationship between the parties. Such scenarios could result in different tax consequences compared to traditional loans.

For instance, if the legislation narrowly defines a debt instrument as something involving fiat currency, loans involving cryptoassets might fall outside the scope of existing rules, potentially leading to gaps in taxation or inconsistent treatment, especially concerning interest payments and their deductibility. Taxpayers might then argue that these transactions should not trigger the same tax obligations as traditional debt instruments, potentially reducing their tax liabilities.

Therefore, it is essential to examine the definition of a debt instrument to ensure it is broad enough to include cryptoassets and that appropriate guidelines or rules are in place to clarify their treatment. This will help prevent potential tax avoidance and ensure the consistent application of tax laws across different types of assets.

Q2.	In case cryptoassets are not explicitly considered debt instruments, are interest payments on loans involving cryptoassets subject to the same tax rules as loans of fiat currency or securities? How would this affect the deductibility of interest payments?

Background and rationale

If cryptoassets are not classified as debt instruments, there may be uncertainty about whether the tax rules that apply to traditional interest payments on loans of money or securities also apply to interest payments on loans involving cryptoassets. This uncertainty can lead to inconsistent tax treatment, which could have significant implications for both taxpayers and tax authorities.

If the definition of "interest" in the tax legislation is broad enough to include payments related to cryptoassets functioning as debt instruments, these payments might still be taxed under the general rules governing interest. Therefore, interest deriving from those cryptoassets would be subject to similar rules with respect to the timing of recognition, the valuation of the interest, and the conditions under which interest payments are deductible.

However, if the definition is too narrow, interest payments on loans involving cryptoassets could fall outside the scope of existing tax rules, potentially leading to gaps in taxation. This situation could lead to uncertain results. For example, specific anti-abuse measures established for interests from traditional loans may not be applicable.

Therefore, it is crucial to assess how existing tax legislation applies to interest derived from cryptoassets functioning as debt instruments. Clear guidance is needed to ensure consistent application of tax rules across different types of assets and to prevent potential loopholes that could be exploited for tax avoidance. Additionally, tax authorities may need to make a policy decision on whether to develop specific regulations for the taxation of interest related to cryptoassets, particularly if the current legislation is found to be insufficient.

Q3.	Are there specific anti-avoidance rules that could prevent the manipulation of taxable income through the use of loans involving cryptoassets?

Background and rationale

The use of cryptoassets in financial transactions, particularly as debt instruments in loans, presents new opportunities for the manipulation of taxable income. One method of manipulation could involve structuring loans in a way that artificially inflates or deflates the value of the cryptoassets involved. For instance, a taxpayer might overvalue the cryptoassets used as collateral to secure a larger loan, which could then be used to claim higher interest deductions. Conversely, undervaluing the cryptoassets could reduce the recognized income on repayment, effectively lowering the taxpayer's taxable income. Another potential method of manipulation involves the timing of transactions. Given the volatility of cryptoassets, a taxpayer might strategically choose when to report the value of these assets to minimize their tax liability. For example, a taxpayer could delay recognizing income from a loan until the value of the cryptoasset has decreased, thus reporting a lower income.

These scenarios can be particularly challenging to regulate because traditional anti-avoidance rules are often not designed with cryptoassets in mind. Traditional rules may focus on more conventional forms of tax avoidance. Therefore, the effectiveness of these rules in preventing manipulation involving crypto-based loans needs to be critically evaluated.

To assess the adequacy of existing anti-avoidance rules, it is essential to examine whether these rules are broad enough to cover the specific scenarios in which cryptoassets could be used for tax base erosion. This involves analyzing how these rules are applied in practice, particularly in cases where cryptoassets are used in ways that differ from traditional financial instruments. If, upon evaluation, it is found that existing anti-avoidance rules are not sufficiently comprehensive to address these specific forms of manipulation, this would indicate a significant risk of tax arbitrage.

Risk 3.2.3: Hybrid instruments

Financial instruments that exhibit characteristics of both equity and debt are classified as hybrid instruments.[91] These instruments can pose significant challenges in terms of tax treatment. The complexity increases when facing cryptoassets that function as hybrid instruments, further blurring the lines between equity and debt. The existing tax legislation typically assesses a hybrid instrument based on its predominant characteristics to determine the appropriate tax treatment, being also subject to specific anti-avoidance rules. However, the unique features of cryptoassets raise questions about whether current definitions and frameworks are adequate to address transactions with cryptoassets functioning as hybrid instruments.

Refer to the financial questionnaire for the first four questions.

Please complete the four questions listed in the financial questionnaire above before proceeding with the following questions, as they are crucial for setting the necessary context for discussing the taxation of cryptoassets functioning as hybrid instruments.

Q1.	Does the current tax legislation explicitly define or recognize hybrid instruments that have characteristics of both equity and debt? Are cryptoassets that combine characteristics of both equity and debt explicitly included or excluded? Could these meet these definitions?

Background and rationale

The emergence of hybrid instruments in financial markets has long posed challenges for tax authorities. These instruments, which possess characteristics of both equity and debt, require careful consideration to ensure they are taxed appropriately. Traditional financial instruments are usually classified clearly as either equity or debt, each with its own set of tax implications. However, hybrid instruments blur these lines, making it more difficult to determine the correct tax treatment.

Tax legislations typically include the concept of hybrid instruments but often rely on specific characteristics, such as the presence of voting rights, the expectation of dividend payments, or the existence of a repayment obligation, to determine whether these instruments are treated as equity or debt. However, when cryptoassets exhibit characteristics of both equity and debt, it becomes less clear how these traditional criteria apply, raising concerns about whether such assets fall within the existing definition of a hybrid instrument. Cryptoassets can exhibit a wide range of behaviors and features, often influenced by the specific blockchain technology or platform they are built upon.

Therefore, it is crucial to analyse whether current legislation defines hybrid instruments broadly enough to encompass cryptoassets with hybrid characteristics.

91 Jakob Bundgaard, *Hybrid Financial Instruments in International Tax Law* (The Netherlands, Wolters Kluwer, 2017), p. 5.

Ensuring that these definitions are inclusive is important because failing to do so could lead to inconsistent tax treatment and potential loopholes, which might be exploited for tax avoidance. Such inconsistencies could undermine the fairness of the tax system and create opportunities for tax arbitrage.

Q2.	How does the tax system classify income generated from hybrid instruments? Are there specific anti-abuse measures?

Background and rationale

The classification of an instrument as a hybrid instrument dictates how the income generated from such instruments is treated under the tax system. Typically, hybrid instruments are taxed based on whether they resemble debt or equity, with each classification carrying distinct tax consequences. For example, if a hybrid instrument is deemed more akin to equity, income might be treated as dividends, subject to withholding taxes and potentially benefiting from tax treaties. Conversely, if the instrument is more debt-like, the income might be classified as interest, which could be deductible for the payer but taxable for the recipient.

Countries often implement anti-abuse rules to prevent the manipulation of tax outcomes through the use of hybrid instruments. These rules are designed to address scenarios where taxpayers might attempt to exploit the nature of hybrids to achieve more favorable tax treatments, such as structuring an instrument to be treated as debt for one jurisdiction (enabling interest deductions) while being treated as equity for another (benefiting from favorable dividend treatment). Common anti-abuse measures include recharacterization rules, which allow tax authorities to reclassify an instrument based on its economic substance rather than its legal form, and specific provisions that deny certain tax benefits when hybrid instruments are used in cross-border transactions.

When considering cryptoassets that exhibit characteristics of both debt and equity, the application of these tax consequences becomes more complex. If cryptoassets were included in the definition of hybrid instruments, either because existing legislation is broad enough to encompass them or because it is included through legal modifications, it would be essential to assess whether the current tax consequences of hybrid classification could be effectively applied. Furthermore, the adaptability of existing anti-abuse measures to cryptoassets functioning as hybrid instruments should be evaluated. Given the novel and evolving nature of cryptoassets, traditional anti-abuse rules may not fully capture the potential for tax avoidance strategies that these assets could facilitate. For example, the decentralized nature of crypto transactions may allow taxpayers to structure deals in ways that are difficult for tax authorities to detect and challenge. Ensuring that anti-abuse measures are robust and adaptable to the unique features of cryptoassets is crucial for maintaining the integrity of the tax system.

Q3.	How does the current tax framework address the valuation and reporting requirements for hybrid instruments? Are these requirements adequate for cryptoassets with hybrid features?

Background and rationale

The valuation and reporting of hybrid instruments are important elements of their tax treatment, as they directly influence the amount of taxable income and the timing of tax liabilities. Traditional hybrid instruments often have defined methodologies for valuation based on market conditions, contractual terms and the economic characteristics of the instrument, with reporting requirements in place to ensure the disclosure of relevant information to tax authorities.

However, if cryptoassets with hybrid features are classified as hybrid instruments, these valuation and reporting requirements may not be as straightforward. Cryptoassets often lack the transparency and stability of traditional financial instruments, with their value being highly volatile and dependent on market dynamics that are not always well-regulated. This volatility poses challenges for accurate valuation, which is essential for determining the tax base. Furthermore, the decentralized and pseudonymous nature of many cryptoassets can make it difficult for tax authorities to track and verify transactions.

Therefore, it is important to evaluate whether the existing tax framework's valuation and reporting requirements are adequate for cryptoassets with hybrid features. If these requirements are insufficient, there is a risk that cryptoassets could be misvalued or underreported, leading to potential tax evasion or avoidance.

Risk 3.2.4: Derivatives

Derivatives constitute a broad category of financial instruments that derive their value from underlying assets, which may include equity, debt, or others, like commodities.[92] Derivatives are important to many financial markets, providing mechanisms for hedging risk, speculating on price movements, or gaining exposure to specific assets without directly owning them. In the context of cryptoassets, derivatives can either mimic traditional derivatives or represent derivatives of other cryptoassets. This dual role presents significant challenges for tax authorities, as it raises important questions about the adequacy of existing tax legislation to ensure that the tax treatment is consistent with the intended tax policies. A thorough review of the current tax framework is necessary to address these challenges and prevent potential gaps or inconsistencies.

Refer to the financial questionnaire for the first four questions.

Please complete the four questions listed in the financial questionnaire above before proceeding with the following questions, as they are crucial to providing the necessary context for discussing the taxation of cryptoassets functioning as derivatives.

92 Bishnupriya Mishra and Sathya Swaroop Debasish, *Financial Derivatives* (New Delhi, Excel Books, 2007), p. 2.

Q1.	Does the current tax legislation explicitly define and regulate derivatives? Could cryptoassets that function as derivatives meet these definitions?

Background and rationale

The definition and regulation of derivatives are crucial for ensuring that these financial instruments are taxed appropriately and consistently within a tax system. Derivatives are inherently complex, and tax systems typically rely on specific criteria to define them, which subsequently determine how gains, losses and income generated from these instruments are treated.

Cryptoassets can function similarly to traditional derivatives or serve as the basis for new derivative products, raising questions about whether current tax definitions are sufficiently broad to encompass these instruments. In many jurisdictions, derivatives are defined by the nature of the underlying asset and the contractual obligations between parties. However, the unique features of cryptoassets may not be fully captured by these traditional definitions.

The inclusion or exclusion of cryptoassets within the tax definition of derivatives determines the tax implications of transactions involving such assets. If cryptoassets that function as derivatives have been explicitly included, then important aspects like valuation methods, timing of recognition of the income and reporting requirements should be thoroughly analysed to verify if risks like volatility, pseudonymity and cross-border transactions are adequately addressed. It can also be the case that, even though cryptoassets are not expressly included, the existing definition is broad enough to encompass them. In such a scenario, it is important to analyse if risky elements of these instruments are effectively addressed. For example, the volatility of cryptoassets might not be adequately accounted for under traditional valuation methods, leading to potential tax base erosion.

Conversely, if it is concluded that they are not included in these definitions, they may escape the intended tax treatment, leading to inconsistencies and potential tax avoidance. This could result in a lower tax burden for these instruments compared to traditional derivatives, creating opportunities for tax arbitrage.

Given the increasing role of cryptoassets in financial markets, it is important to review existing tax legislation to ensure that it adequately defines and regulates these instruments. A clear and comprehensive definition will help prevent regulatory gaps, reduce the risk of tax evasion and avoidance, and ensure that the taxation of these innovative instruments aligns with broader tax policy goals.

Q2.	How does the current tax system classify and tax the income generated from derivatives? In the absence of specific legislation, could existing rules be applicable to income generated from derivatives involving cryptoassets, either as underlying assets or as the derivative itself?

Background and rationale

The classification and taxation of income generated from derivatives are fundamental for ensuring that a tax system effectively captures economic activity and maintains fairness and consistency. Traditionally, derivatives are classified and taxed based on the nature of their underlying assets and the specific characteristics of the financial instrument. For example, income from derivatives linked to equities might be treated as capital gains, while income from derivatives tied to debt instruments could be considered interest income.

Due to their features, cryptoassets may not align with these traditional classifications. Cryptoassets can function either as underlying assets for derivatives or as derivatives themselves. This raises the critical question of whether current tax rules, which were designed for traditional financial instruments, can be effectively applied to these new types of assets. To address this question, it is essential to first analyse how the current tax system classifies and taxes income from derivatives. This involves examining the criteria used to determine whether income is treated as capital gains, interest, or ordinary income, and how these classifications impact the timing of recognition, reporting requirements and applicable tax rates.

Once the current rules are understood, the next step is to assess whether these rules can be effectively applied to cryptoassets functioning as derivatives. Even if cryptoassets that function as derivatives are classified as such under the existing rules, it is crucial to evaluate whether the tax treatment aligns with that of traditional derivatives. This requires careful analysis of whether the unique characteristics of cryptoassets (such as decentralization, high volatility and pseudonymity) affect their taxation under existing frameworks. For example, a cryptoasset derivative might not fit neatly into the categories used for traditional financial instruments, potentially leading to different tax outcomes. If the application of current rules to cryptoassets results in different tax outcomes, this is evidence of gaps in the tax system that might allow for tax evasion and avoidance or arbitrage.

Q3.	Are there anti-avoidance provisions in the current tax legislation that prevent the use of derivatives for tax planning purposes? Could these provisions be effectively applied to cryptoasset derivatives to prevent tax avoidance or abuse?

Background and rationale

Derivatives, given their complex nature and flexibility, have historically been used as tools for tax planning strategies. These strategies can significantly erode the tax base if not adequately addressed by legislation.

Therefore, it is important to determine whether there are specific anti-avoidance provisions in the current tax legislation that apply directly to derivatives. If such provisions exist, a good practice would be to evaluate their effectiveness over time, whether they have successfully deterred tax avoidance or whether they have been circumvented, leading to the erosion of the tax base. This evaluation should consider the scope and specificity of these provisions, as well as any enforcement challenges that may have arisen. In

the absence of specific anti-avoidance rules for derivatives, the analysis can explore how general anti-abuse rules have been applied to address issues related to derivative transactions. General rules might provide a broader framework for preventing tax avoidance, but their effectiveness can vary depending on how well they are tailored.

The next step is to assess whether these existing anti-avoidance provisions can be effectively applied to cryptoassets functioning as derivatives. Cryptoassets present distinct challenges due to their decentralized nature, high volatility and the potential for pseudonymity, which may complicate enforcement and detection efforts. It is important to analyse whether the current provisions can address these specific issues, such as the potential for cryptoassets to be used in complex cross-border transactions that could exploit regulatory gaps. If the existing provisions are found to be insufficient for addressing the risks associated with cryptoassets functioning as derivatives, this analysis will highlight the need for adaptation of the existing rules or the development of new legislation. Such legislation would need to be robust enough to prevent tax evasion and avoidance while accommodating the unique characteristics of cryptoassets, ensuring that they do not undermine the integrity of the tax system.

Risk 3.2.5: Forex

The trading of foreign currencies is often governed by distinct tax regimes that differ from those applied to the trading of other non-currency assets. However, the use of cryptoassets, particularly payment tokens intended for use as a medium of exchange, raises important questions about their classification and the appropriate tax treatment. Most jurisdictions currently do not consider cryptoassets to be foreign currencies, however, countries will need to consider whether payment tokens should be subject to tax rules similar to those applied to foreign currencies and, if so, what safeguards are necessary to ensure fair and consistent taxation.

Refer to the financial questionnaire for the first four questions.

Please complete the four questions listed in the financial questionnaire above before proceeding with the following questions, as they are crucial for providing the necessary context for discussing the taxation of forex involving cryptoassets.

Q1.	Is there a definition of "foreign currency" in tax legislation? Does this definition explicitly exclude cryptoassets, and if so, are there provisions for payment tokens intended to function as a medium of exchange?

Background and rationale

Typically, foreign currencies are governed by distinct rules due to their role as primary mediums of exchange. The definition of foreign currency within a country's tax law is particularly relevant when the trading of currency can lead to a taxable event.

The use of cryptoassets, particularly those designed to function as payment tokens, raises the question of whether these digital assets could or should be classified as foreign currency. Unlike traditional currencies, cryptoassets are not issued by any

central authority and typically lack legal tender status.[93] Thus, most jurisdictions do not currently recognize cryptoassets as foreign currency. However, as the use of payment tokens becomes more frequent and they gain greater relevance, tax authorities need to reassess these classifications.

If cryptoassets are not considered foreign currencies, tax rules applicable to the trade of foreign currency would not apply to the trade of payment tokens intended to function similarly to traditional currencies. This could lead to uncertainty regarding how these transactions should be treated under the tax system. In such cases, it becomes essential to analyse the existing tax system to determine if other rules might govern these transactions or if new provisions are needed to ensure consistent and fair taxation.

This analysis is necessary to prevent potential gaps or inconsistencies that could lead to tax avoidance or other unintended consequences.

Q2.	How is income from the trading of foreign currencies currently taxed? Do the rules applicable to the trading of cryptoassets that function as a medium of exchange produce similar tax outcomes?

Background and rationale

When countries consider the trade of foreign currencies a taxable event, tax legislation often dictates how and when income is recognized, the applicable tax rates and any relevant reporting requirements.

Given that most jurisdictions do not classify cryptoassets as foreign currencies, the tax rules for foreign currency trading generally do not apply to transactions involving cryptoassets, even when these assets function as a medium of exchange. However, it is crucial to examine whether the tax outcomes for trading cryptoassets functioning as a medium of exchange are similar to those for foreign currencies. This includes evaluating whether the same criteria for income recognition, tax rates and reporting apply, and if not, identifying any discrepancies that could lead to inconsistent or inequitable treatment.

By comparing the tax treatment of these two types of transactions, this analysis seeks to determine whether the existing tax framework produces similar outcomes, ensuring that the system remains consistent across different types of assets that function as mediums of exchange. If significant differences are found, it may indicate a need for adjustments in the legislation to address potential gaps or inconsistencies.

Risk 3.2.6: Decentralized finance

The emergence of decentralized finance (DeFi) has revolutionized the financial landscape by making borrowing, lending and other financial services more accessible to a broader range of participants. Unlike traditional finance, which relies heavily on large financial institutions, DeFi operates on decentralized networks, enabling

93 Although jurisdictions like El Salvador or the Central African Republic have conferred legal tender status to cryptocurrencies (specifically, bitcoin).

users to engage in financial activities without intermediaries. This shift has led to the creation of innovative instruments, such as "liquidity pool tokens", which represent a user's share in a pool of assets that provides liquidity for decentralized exchanges. As these innovations continue to grow in popularity, tax authorities face the challenge of determining how to classify and tax these new instruments. Policymakers will want to ensure that the tax treatment of DeFi instruments is consistent with their traditional counterparts and aligned with broader tax policy objectives.

Refer to the financial questionnaire for the first four questions.

Please complete the four questions listed in the financial questionnaire above before proceeding with the following questions, as they are crucial for setting the necessary context for discussing the taxation of DeFi involving cryptoassets.

Q1.	Does the current tax legislation explicitly recognize or define decentralized finance (DeFi) activities? If so, how are transactions conducted on these platforms treated for tax purposes?

Background and rationale

DeFi represents a significant shift in the financial landscape, moving away from traditional, centralized financial institutions toward peer-to-peer financial services facilitated by blockchain technology. Unlike conventional finance, where banks and other financial intermediaries play a central role, DeFi allows users to engage in borrowing, lending, trading and other financial activities directly through decentralized platforms. These platforms operate on blockchain networks, using smart contracts to automate transactions without the need for intermediaries. As DeFi continues to grow, it challenges existing financial and regulatory frameworks, including the tax systems that were designed with traditional financial structures in mind.

On DeFi platforms, users can deposit cryptoassets into liquidity pools and earn interest from others who borrow these assets. Another common DeFi activity is yield farming, where users stake or lock up their cryptoassets in a pool to earn rewards, often in the form of additional tokens. Liquidity pool tokens represent a user's share in a pool of assets that provides liquidity for decentralized exchanges, and these tokens can often be traded or used as collateral within the DeFi ecosystem. Further information can be found in appendix I.d.

Given the innovative nature of DeFi, its activities often fall outside the traditional regulatory frameworks. If there is already a regulation for DeFi in place within the tax framework, it is crucial to understand how transactions conducted on these platforms are treated. This includes regularly evaluating whether the existing rules adequately cover the unique aspects of DeFi transactions, such as the use of cryptoassets as collateral, the earning of interest or rewards through staking and the trading of liquidity pool tokens. Without explicit recognition of DeFi, there may be gaps in the tax system that could lead to uncertainty, potential tax avoidance, or inconsistent treatment of similar financial activities.

Q2.	If transactions involving cryptoassets in DeFi activities are not explicitly regulated, how does the current tax system treat income or gains generated from such activities?

Background and rationale

DeFi platforms enable activities such as borrowing, lending, staking and trading without the need for intermediaries like banks. These activities generate income and gains for participants, often in the form of staking rewards, interest payments, or profits from trading liquidity pool tokens.

Many jurisdictions have yet to establish specific tax regulations governing DeFi. In the absence of such rules, it is essential to examine how the current tax system treats transactions within DeFi and whether existing regulations can be applied effectively.

In traditional finance, income from interest, dividends and capital gains is typically subject to specific tax rules that dictate how and when such income occurs, how it should be reported and taxed. In the DeFi space, similar types of income are generated through mechanisms like staking rewards (where users lock up cryptoassets to secure the network and earn rewards) or providing liquidity to decentralized exchanges. The challenge lies in determining whether income generated through DeFi is treated in the same way as their traditional counterparts under existing tax laws, or if there are significant discrepancies that could lead to inconsistent or inequitable tax outcomes. This analysis will also identify possible transactions in DeFi that do not have a direct counterpart in traditional finance.

It is crucial for tax authorities to assess whether the current tax framework is capable of effectively regulating income and gains generated from DeFi activities. If not, there may be a pressing need for the development of new, more specific regulations to address the unique challenges posed by DeFi.

Risk 3.2.7: Redeemable tokens

Redeemable tokens represent a specific category of asset-backed tokens that grant the holder the right to redeem the underlying assets upon the fulfillment of certain conditions. These tokens introduce unique challenges in terms of tax treatment, as they blur the lines between being treated as the underlying assets themselves or as distinct financial instruments, such as derivatives. The tax treatment of redeemable tokens is particularly complex when considering the nature of the underlying assets, which could range from currencies and commodities to other cryptoassets.

Refer to the financial questionnaire for the first four questions.

Please complete the four questions listed in the financial questionnaire above before proceeding with the following questions, as they are crucial for setting the necessary context for discussing the taxation of redeemable tokens.

Q1.	Does the current tax legislation explicitly address the treatment of redeemable tokens? If so, are they treated as equivalent to the underlying assets, or are they classified differently?

Background and rationale

Redeemable tokens are a type of asset-backed token that grants holders the right to redeem the underlying assets when certain conditions are met. These tokens have become increasingly relevant in the evolving landscape of cryptoassets, as they offer a flexible form of ownership that can be tied to a wide range of underlying assets, such as currencies, commodities, or even other cryptoassets.

Given their nature, the tax treatment of redeemable tokens presents a unique challenge for tax authorities, as they can be difficult to classify within existing tax frameworks. One key issue is whether these tokens should be treated as equivalent to the underlying assets they represent or as distinct financial instruments, such as derivatives. This distinction is crucial because it determines how income and gains from these tokens are taxed, including the timing of income recognition, applicable tax rates and reporting requirements.

For example, if a redeemable token is treated as equivalent to its underlying asset, the tax treatment would likely mirror that of the asset itself. This could mean that gains from trading the token are taxed in the same manner as gains from directly trading the underlying asset. On the other hand, if the token is classified as a derivative or another type of financial instrument, it might be subject to different tax rules, leading to different tax outcomes.

If the current legislation does address these tokens, it is important to understand whether they are treated as equivalent to the underlying assets or classified differently, as this will have significant implications for their tax treatment. Other important elements, such as the method of valuation, or the timing of recognition, should also have solid and robust regulation to avoid potential tax arbitrage. Clear guidance is essential to avoid ambiguity, ensure compliance and prevent potential opportunities for tax evasion and avoidance.

Q2.	In cases where redeemable tokens are not explicitly regulated, how would the tax system tax the income or gains generated from transactions involving these tokens?

Background and rationale

The absence of clear tax regulations for redeemable tokens can create uncertainty regarding their classification and the appropriate tax treatment of income and gains generated from transactions involving them.

The primary concern is how income or gains from redeemable tokens are currently treated in the absence of specific regulations. This implies analyzing whether existing

tax rules, such as those for derivatives, securities, or other financial instruments, can be applied to transactions and redemption of these tokens. If the current tax framework can accommodate redeemable tokens by applying analogous rules, it could allow taxation of at least some of these transactions in a way that is consistent with similar financial activities. However, if the existing rules are inadequate or unclear, it could result in varying interpretations, potential tax avoidance and a lack of uniformity in the treatment of similar transactions. This analysis will also help in identifying whether the lack of explicit regulation might necessitate the development of new legislation tailored specifically to redeemable tokens.

A thorough analysis of the current tax framework is necessary to determine whether existing rules are sufficient or if new legislation is required to provide clarity and prevent potential gaps in the tax system.

Risk 3.2.8: Non-redeemable asset-backed tokens

Non-redeemable asset-backed tokens represent a significant category of cryptoassets, often backed by underlying assets that provide a measure of value but do not grant the holder the right to redeem those assets directly. These tokens present unique challenges in terms of tax treatment. Unlike redeemable tokens, the argument for treating non-redeemable tokens as equivalent to their underlying assets is considered to be weaker, especially given that these tokens may not be backed on a one-to-one basis. Instead, they might be backed by a mixture of assets or only partially backed, complicating their classification and, ultimately, taxation.

Refer to the financial questionnaire for the first four questions.

Please complete the four questions listed in the financial questionnaire above before proceeding with the following questions, as they are crucial for setting the necessary context for discussing the taxation of non-redeemable asset-backed tokens.

Q1.	Does the current tax legislation explicitly recognize non-redeemable asset-backed tokens? If so, how are income and gains derived from transactions with them treated, particularly in cases where they are only partially backed or backed by a diverse mix of underlying assets?

Background and rationale

Non-redeemable asset-backed tokens are a category of cryptoassets that are backed by underlying assets, providing a measure of value but without granting the holder the right to redeem those assets directly. These tokens can be structured in various ways, backed by a diverse mix of assets — partially or in full — by the underlying assets. For example, a token might represent a fraction of an asset or a combination of different assets, such as a mix of currencies, commodities, or even other cryptoassets.

The way these token function and are structured introduces significant complexities in terms of tax treatment. One of the main complications arises from their partial

or mixed backing, which blurs the lines between what the token represents and how it should be valued. In case of a lack of a direct, one-to-one correlation between the token and its underlying assets, the appropriate tax classification is challenging to determine. Questions arise as to whether these tokens should be treated as if they were the underlying assets themselves, or if they should be considered separate financial instruments with their own distinct tax implications. The fact that they can be backed by a mixture of asset classes adds layers of complexity to their valuation, income recognition and applicable tax rates. For instance, if a token is partially backed by a volatile commodity and partially by a stable currency, determining its fair market value for tax purposes becomes a difficult task.

If domestic legislation has already addressed the treatment of non-redeemable asset-backed tokens, a critical issue is how the income and gains derived from transactions involving these tokens are treated. The legislation should provide clear guidelines on how to resolve the complications mentioned above and address aspects like how to value these tokens accurately, how and when to recognize income, specific reporting and anti-abuse rules, among others. It is advisable that the legislation addresses these issues explicitly to ensure that the tax treatment is consistent and fair.

Q2.	In the absence of explicit regulation, how does the tax system currently treat income or gains from transactions involving non-redeemable asset-backed tokens?

Background and rationale

In the absence of explicit regulation, the tax treatment of income or gains from transactions involving non-redeemable asset-backed tokens presents significant uncertainty. Without clear legislative guidance, tax authorities and taxpayers will have to rely on existing tax rules and analogies to similar financial instruments to determine how these tokens should be taxed. This approach can lead to inconsistent interpretations and varying tax outcomes.

A potential approach might involve applying general tax rules that govern financial instruments or securities. For instance, income from these tokens could be treated similarly to income from traditional securities, where rules for income recognition, capital gains, or even interest income might be applied depending on the nature of the transaction and the structure of the token. However, the unique characteristics of these tokens, such as their partial backing and diverse asset composition, complicate this analogy, potentially leading to disputes over the correct tax treatment.

Another potential outcome in the absence of specific regulation is the application of anti-avoidance rules or principles of substance over form, where tax authorities might seek to recharacterize the income or gains from these tokens based on their underlying economic attributes rather than their legal form. This would result in transactions involving these tokens being analysed on a case-by-case basis.

In the absence of specific valuation rules for non-redeemable asset-backed tokens, tax authorities may need to rely on general valuation principles, such as the fair market

value concept. However, applying these principles to tokens with variable and mixed backing can be problematic. The fair market value of a token may be influenced by a wide range of factors, including the market value of the underlying assets, the liquidity of the token and broader market conditions. These factors can lead to significant discrepancies in how different taxpayers value the same token.

Despite these challenges, it is crucial to analyse how existing tax rules could be applied in practice to transactions involving non-redeemable asset-backed tokens. Understanding the current situation can highlight areas where the tax system may be falling short and identify the need for more specific regulations.

Risk 3.2.9: Stablecoins

Stablecoins are a unique category of cryptoassets designed to maintain a stable value relative to a specified asset, or a pool or basket of assets, through a mechanism known as "pegging." These tokens can be backed by underlying assets, although not always on a one-to-one basis, or they might rely on alternative mechanisms such as financial engineering, algorithms and market incentives to maintain their stability. Additionally, some stablecoins may use hedging instruments to preserve their value. Given these diverse approaches, it is essential to review existing tax legislation to determine whether stablecoins are adequately covered and treated consistently with their traditional financial counterparts.

Refer to the financial questionnaire for the first four questions.

Please complete the four questions listed in the financial questionnaire above before proceeding with the following questions, as they are crucial for setting the necessary context for discussing the taxation of stablecoins.

Q1.	Does the current tax legislation explicitly address the treatment of stablecoins, particularly considering the different mechanisms used to maintain their peg? Are there specific provisions that differentiate between stablecoins backed by assets and those that maintain their peg through algorithms or financial engineering?

Background and rationale

Stablecoins are a type of cryptoasset designed to maintain a stable value relative to a specified asset. They achieve this stability through various mechanisms, including direct backing by assets, such as fiat currency (like US dollars), or through complex algorithms and financial engineering. These algorithms often involve issuing and burning tokens, or utilizing other digital assets as collateral, to manage fluctuations in value. A notable subclass of stablecoins, known as algorithmic stablecoins, maintains its peg without any underlying asset backing, relying instead on market dynamics and automated adjustments to supply.

The tax treatment of stablecoins can vary significantly depending on how they are structured. For instance, stablecoins that are backed by assets may be treated

similarly to those assets. However, stablecoins that maintain their stability through algorithms or financial engineering might require different tax considerations due to their distinct mechanisms.

While stablecoins are designed to maintain a stable value, they can still generate income or gains in specific contexts. For example, stablecoins deposited on DeFi platforms may earn interest, or they could be used in staking activities to generate rewards. Additionally, the issuance and redemption of stablecoins can have tax implications, depending on how these activities are treated under current tax laws.

If the current tax legislation explicitly addresses the treatment of stablecoins, it is important to understand how it differentiates between those backed by assets and those that rely on algorithms. The legislation should provide clear guidance on how income or gains related to these activities are taxed, including the tax treatment of interest earned from deposits, staking rewards and any potential capital gains from trading or arbitrage activities involving stablecoins. Additionally, the tax implications of issuing and redeeming stablecoins must be considered, as these activities could result in taxable events depending on the structure of the stablecoin and the jurisdiction.

Q2.	In the absence of specific legislation, how does the tax system currently treat income or gains from the use of stablecoins, particularly in relation to their roles as a medium of exchange, a store of value, or in generating interest and rewards?

Background and rationale

In the absence of specific legislation, the tax treatment of stablecoins presents several challenges, especially given their varied uses. When stablecoins are used as a medium of exchange or a store of value, their role can resemble that of traditional currencies. However, unlike fiat currency, the legal and tax frameworks for stablecoins are not likely to be well-defined. Furthermore, stablecoins can generate income or gains in multiple ways, such as through interest earned on deposits, rewards from staking, or even through trading activities.

Without explicit regulation, tax authorities may rely on general principles applicable to financial instruments or fiat currency to determine the tax treatment of stablecoins. For instance, income generated from interest or staking rewards may be treated similarly to interest income from traditional financial products. However, existing definitions in tax rules may not be broad enough to encompass the unique features of stablecoins, such as their stability mechanisms or the fact that they might not be backed by traditional assets, complicating efforts to draw analogies and potentially leading to situations where such income is not taxed appropriately.

In any case, it is crucial to understand how existing tax rules can be applied to transactions involving stablecoins in practice. This examination will reveal whether current frameworks are sufficient to address the income and gains generated from their use or if new regulations are necessary to ensure consistent and taxation.

Risk 3.3: Cryptocurrency as a medium of exchange

One of the primary uses of cryptocurrencies is as a medium of exchange, replacing traditional fiat currencies and other assets in various transactions. This shift poses significant risks to the tax system, including potential loss of tax revenue and challenges in enforcement and compliance. This is largely because cryptocurrency is not classified as a medium of exchange and because of the complexities in valuation and reporting. The following questions are designed to provide a comprehensive understanding of how cryptocurrencies, when used as a medium of exchange, are recognized, valued, reported and audited within the current tax framework. This will help identify potential gaps and areas for improvement.

Cryptocurrency exchange questionnaire
(Preliminary questions for Risks 3.3.1–3.3.4)

Given that Risks 3.3.1–3.3.4 all concern the broad issue of recognizing and taxing cryptocurrency as a medium of exchange, there is a common set of questions - the cryptocurrency exchange questionnaire — that should be answered when considering any of those risks. These questions provide the background for examining more specific situations when considering the various crypto tax risks later.

Q1.	Does the existing tax system recognize and define cryptocurrency as a medium of exchange? Are there anti-abuse measures specifically for cryptocurrency transactions?

Background and rationale

The first step in analyzing the use of cryptocurrencies as a medium of exchange is to determine whether and how they are regulated within the current tax system. Understanding this is crucial because the recognition and definition of cryptocurrencies directly impact how these transactions are treated for tax purposes. If cryptocurrencies are not explicitly recognized as a medium of exchange, transactions involving them may fall outside the scope of the tax system, potentially leading to revenue loss. Additionally, it is important to assess whether there are anti-abuse measures in place specifically for cryptocurrency transactions, to prevent tax evasion and ensure compliance.

One of the key elements of legislation is the clarity of definitions established within the cryptocurrency tax regime. Clear definitions are essential for delineating the scope of tax regulations, that is, determining which transactions and assets are subject to taxation. Additionally, well-defined terms provide legal certainty, reducing ambiguity and fostering a more predictable and reliable tax environment. This legal clarity helps to prevent disputes and ensures that tax obligations are applied uniformly. Moreover, without clear definitions, there can be inconsistencies in how taxpayers report transactions involving cryptocurrencies, which complicates tax compliance and enforcement. Clear definitions help ensure that all parties involved understand their tax obligations and can accurately report their activities.

The presence of anti-abuse measures is equally important. Cryptocurrencies, by their nature, offer a degree of anonymity and can facilitate cross-border transactions, making them attractive for tax evasion. Anti-abuse measures specifically targeting cryptocurrency transactions help prevent such misuse by ensuring that these transactions are subject to scrutiny and appropriate taxation.

Most countries currently lack specific regulations regarding cryptocurrencies, and even if such regulations exist, it is essential to review the definitions of cryptocurrencies and their use as a medium of exchange and assess their effectiveness regularly due to innovations in the area of cryptocurrencies. This ensures that the tax system is equipped to handle the unique challenges posed by cryptocurrency transactions.

Q2.	If there is no specific legislation for the use of cryptocurrencies as a medium of exchange, how does the tax system currently treat the exchange of non-cash assets for tax purposes? How are these transactions valued and taxed if applicable?

Background and rationale

Non-cash asset transactions (e.g., barter exchange) involve the direct exchange of goods or services without the use of money. This type of transaction is conceptually similar to many cryptocurrency transactions, where (digital) assets are exchanged for other assets, goods, or services. In the absence of specific regulations governing the use of cryptocurrencies as a medium of exchange, it becomes crucial to understand how the tax system currently treats the exchange of non-cash assets, such as barter transactions, for tax purposes. Analyzing this legislation is important for several reasons.

Firstly, identifying how these non-cash transactions are valued and taxed provides a framework for potentially applying the same principles to cryptocurrency transactions. Typically, non-cash asset exchanges are valued based on the fair market value of the goods or services exchanged, and any resulting gains or losses are taxed accordingly. Knowing this helps determine if similar valuation and taxation methods can be adapted for cryptocurrencies.

Secondly, if the existing tax system adequately captures and taxes barter transactions, it is important to evaluate whether existing rules are sufficient for handling cryptocurrency transactions, as it is likely that the use of cryptocurrencies as a medium of exchange would produce the same tax result. If not, at the very least, understanding the current system could reveal a pathway for integrating cryptocurrencies into the tax framework. Conversely, if there are gaps or inefficiencies in taxing non-cash assets, these issues may also affect the taxation of cryptocurrencies. If the framework for non-cash assets is inadequate, changes to legislation may be needed to ensure comprehensive taxation of cryptocurrency exchanges.

Q3.	How does the tax system ensure compliance and enforcement for transactions involving non-cash assets? What mechanisms are in place to track, report and audit these transactions?

Background and rationale

Ensuring compliance and enforcement is a critical function of any tax system. Non-cash transactions pose unique challenges for tax authorities due to their non-monetary, and often, non-traceable nature. To effectively monitor and regulate these transactions, tax systems may implement specific mechanisms. Given the similarities between these transactions and the use of cryptocurrencies as a medium of exchange, it is essential to understand how these mechanisms function in practice and evaluate their effectiveness.

One method for ensuring compliance is the requirement for detailed record-keeping and reporting by the parties involved in non-cash transactions. This includes documenting the fair market value of the exchanged goods or services, the date of the transaction and the identities of the participants. This method provides documentation that tax authorities can use to verify the accuracy of reported transactions and ensure that the correct amount of tax is being paid. For cryptocurrency transactions, which share similarities with barter transactions, clear reporting and documentation requirements are equally important. Therefore, it is particularly relevant to assess whether the existing reporting frameworks for barter transactions can be adapted to handle cryptocurrency transactions. However, it is also important to recognize that the unique characteristics of cryptocurrencies may require additional or different mechanisms.

In addition to standard reporting requirements, tax authorities may employ other mechanisms to enhance compliance and enforcement. These can include periodic audits of businesses that engage in a high volume of non-cash transactions, cross-referencing reported transactions and using advanced data analytics to detect patterns of non-compliance or fraud. These tools help ensure that non-cash transactions are not overlooked and that tax liabilities are correctly assessed.

For cryptocurrency transactions, compliance mechanisms are crucial. Traditional methods of auditing would profit from being supplemented with new technologies, such as blockchain analytics, to trace transactions on the blockchain and identify potential tax evasion. Additionally, requiring cryptocurrency exchanges to report transactions and holdings can provide tax authorities with valuable information to ensure compliance.

If the existing system is overly permissive or lacks the necessary tools to effectively monitor non-cash transactions, it is likely to face even greater challenges with cryptocurrencies. Identifying these gaps allows tax authorities to develop more robust strategies to track, audit and enforce compliance for all types of non-cash transactions, including those involving cryptocurrencies.

Risk 3.3.1: Exchange of cryptocurrency for fiat currency

The exchange of cryptocurrency for fiat currency presents significant tax challenges, particularly as it represents an intersection between cryptoassets and the traditional financial system. In many jurisdictions, the exchange of crypto for fiat currency will be a realization event and accordingly taxable. However, the inherent volatility of cryptocurrencies complicates the valuation process for tax purposes, potentially leading to disparities in how gains and losses are reported. On the other hand, where crypto is used as a medium of exchange, a policy decision will need to be made regarding whether such exchanges should be subject to the tax rules that are typically applied to forex transactions, if such rules exist in the jurisdiction, or to different ones. This decision will also require determining what safeguards need to be implemented to mitigate risks of tax evasion and underreporting.

Refer to the cryptocurrency exchange questionnaire for the first three questions.

Please complete the three questions listed in the cryptocurrency exchange questionnaire above before proceeding with the following questions, as they are crucial to providing the necessary context for discussing the exchange of cryptocurrency for fiat currency.

Q1.	If cryptocurrencies are recognized as a medium of exchange, what tax implications arise from the exchange of cryptocurrencies for fiat currency?

Background and rationale

Building on the first of the preliminary questions, in jurisdictions where cryptocurrencies are legally recognized as a medium of exchange, countries have opted to apply tax rules typically applied to forex transactions. Forex transaction rules may provide a suitable model for cryptocurrency exchanges that can help in crafting tax regulations. However, analysis may be necessary to discern if existing rules do not lead to unintended tax consequences. This analysis is critical to ensure that the use of cryptocurrencies cannot generally lead to tax arbitrage.

If specific forex rules do not exist or if it was decided not to apply these regulations to the exchange of cryptocurrencies for fiat currency, it is crucial to determine whether the current tax system has clearly established tax consequences for these transactions. For jurisdictions that have decided to tax these transactions, it is important to analyse the tax impacts and see if anti-abuse measures apply and work effectively.

Q2.	Is the exchange of cryptocurrency for fiat currency considered a taxable event under current tax legislation?

Background and rationale

In jurisdictions where cryptocurrencies are not legally recognized as a medium of exchange, it becomes crucial to determine if the exchange of cryptocurrencies for fiat currencies is considered a taxable event under existing legislation.

In cases where legislation expressly states that such exchanges are taxable, it is important to understand how these transactions are defined, reported, valued and taxed. The absence of clear regulatory frameworks can lead to significant gaps in tax compliance. Therefore, it is crucial to examine the current regulatory state and identify the associated risks of underreporting and tax evasion.

Conversely, in many countries lacking specific legislation for cryptocurrencies, the exchange might still be considered a taxable event under the general legal definitions. In these scenarios, it is essential to assess how these transactions would be reported, valued and taxed. This process will highlight whether current laws require adaptation to adequately address these types of transactions.

In any case, one of the most critical aspects to analyse is how transactions involving the exchange of cryptocurrency for fiat currency are valued. Given the volatility of cryptocurrencies, the valuation of these assets at the point of exchange can significantly impact the amount of tax liability incurred by the taxpayer. The lack of consistent standards for valuing cryptocurrency can lead to discrepancies in how gains or losses are calculated, further complicating the enforcement of tax regulations. This might lead to the exploitation of these discrepancies to underreport gains or manipulate the timing of transactions to minimize tax obligations.

It is also possible that current legislation does not consider the exchange of cryptocurrencies for fiat currency as a taxable event, either because these transactions are not explicitly addressed, or because the general definitions do not adequately encompass them. This means that income or gains derived from such transactions are not subject to taxation. This scenario opens the door to tax arbitrage, where taxpayers may exploit these omissions to reduce their tax liabilities. Such situations not only result in lost revenue but also negatively impacts the equity and effectiveness of the tax system.

As tax authorities seek to adapt existing frameworks to accommodate the unique characteristics of cryptocurrencies, understanding the current regulatory landscape and identifying where gaps or inconsistencies exist is crucial.

Risk 3.3.2: Exchange of cryptocurrency for other cryptoassets

The exchange of cryptocurrencies for other cryptoassets usually falls under the category of barter exchanges, yet these transactions present unique challenges due to the nature of the assets involved. Unlike typical barter transactions, the valuation of cryptoassets can be highly volatile and for a majority of cryptocurrencies, there is a lack of a standard market price. In many jurisdictions, the absence of specific regulations requires that general tax rules be adapted, raising issues around valuation, tax reporting and compliance. The following questions seek to examine how current tax systems address these exchanges and explores the effectiveness of existing measures to manage the risks of tax arbitrage.

Refer to the cryptocurrency exchange questionnaire for the first three questions.

Please complete the three questions listed in the cryptocurrency exchange questionnaire above before proceeding with the following questions, as they are crucial to providing the necessary context for discussing the exchange of cryptocurrency for other cryptoassets.

Q1.	Is the exchange of cryptocurrency for other cryptoassets expressly regulated for tax purposes? If so, what are the rules in place for the valuation of both cryptoassets involved? Are there specific anti-abuse measures included, and have these measures been effective?

Background and rationale

In jurisdictions where specific regulation has been established, it is essential to analyse how these rules address the valuation of the exchanged cryptoassets. This analysis should consider whether the valuation methodologies are adequate to capture the fair market value in a highly volatile environment.

Furthermore, given the potential for these transactions to be used in abusive tax planning, it is critical to evaluate the effectiveness of anti-abuse measures, if any. This includes examining whether the measures have been successful in mitigating practices such as undervaluation or non-reporting of transactions in an effort to evade tax obligations. Assessing the effectiveness of these measures provides crucial insight into whether current regulations are sufficient or if amendments are needed to strengthen the legal framework and ensure fair and transparent taxation.

Q2.	In the absence of specific regulations, how does current tax legislation treat non-cash asset exchanges? Would these rules be comprehensive enough to encompass the exchange of cryptocurrencies for other cryptoassets and would they adequately address the valuation challenges inherent to such transactions?

Background and rationale

In jurisdictions lacking specific regulations for the exchange of cryptocurrencies for other cryptoassets, these transactions often fall under the broader category of barter exchanges. This classification brings into question how current tax laws treat such exchanges. Typically, barter exchanges are considered taxable events where each party must recognize the fair market value of the assets received as income.

It is crucial to examine whether existing rules for non-cash asset exchanges are comprehensive enough to cover these kinds of cryptocurrency transactions. This involves assessing if the current legal frameworks can adapt to the complexities of crypto exchanges, especially in valuing the assets accurately to prevent tax evasion. The potential for these rules to be modified to better suit the needs of crypto transactions needs to be considered, especially in scenarios where these exchanges occur between businesses. This could affect how business taxable income is calculated and what deductions might be permissible, thus impacting the overall tax obligations of the entities involved.

Furthermore, the evaluation must include how well the existing legal provisions manage the risks associated with valuation disparities, which can lead to tax arbitrage opportunities. The ability of the current system to handle these risks effectively is essential for maintaining the integrity of the tax framework and ensuring compliance across different economic activities involving cryptoassets.

Q3.	How does the current tax system mitigate risks of tax evasion and undervaluation in exchanges involving non-cash assets?

Background and rationale

In the absence of specific regulations for cryptocurrency exchanges, the general rules for barter transactions are often applied. These rules are designed to address the tax obligations and potential for evasion that can occur when goods or services are exchanged without involving cash. However, applying these rules to the exchange of cryptocurrencies for other cryptoassets, including other cryptocurrencies, introduces additional complexities due to the digital nature and volatility of these assets.

An important aspect of existing barter exchange regulations are the anti-evasion measures. These measures typically include requirements for accurate documentation and reporting of the fair market value of exchanged assets. It is crucial to assess whether these measures are robust enough to handle the challenges posed by cryptocurrency transactions, such as the ease of transferring and hiding assets digitally and the rapid fluctuations in value.

The analysis needs to explore the extent to which current anti-evasion frameworks can be adapted for use with cryptoassets. This involves evaluating the effectiveness of current measures in other contexts and considering whether additional or modified regulations are necessary to adequately capture the nuances of cryptocurrency exchanges. The goal is to ensure that these transactions do not become conduits for tax evasion or undervaluation, thereby undermining the fairness and effectiveness of the tax system.

This analysis will help determine if the current tax system's approach to non-cash assets is sufficient or if there is a need for specific adjustments or enhancements to better accommodate the exchange of cryptocurrencies for other cryptoassets.

Risk 3.3.3: Exchange of cryptocurrencies for goods and services

The use of cryptocurrencies in the purchase of goods and services presents new challenges for tax systems. It is crucial that tax legislation is sufficiently comprehensive to recognize and tax these transactions. This involves ensuring that the use of cryptocurrencies for buying goods or services is treated with similar rules as those conducted with traditional fiat currencies. The following questions explore the extent to which current tax laws can address transactions where cryptocurrencies are exchanged for goods and services, focusing on the valuation, taxation and reporting of such transactions.

Refer to the cryptocurrency exchange questionnaire for the first three questions.

Please complete the three questions listed in the cryptocurrency exchange questionnaire above before proceeding with the following questions, as they are crucial to providing the necessary context for discussing the exchange of cryptocurrency for goods and services.

Q1.	Is the exchange of cryptocurrency for goods and services specifically addressed in tax law or regulations, and if so, how are these transactions valued and taxed?

Background and rationale

The integration of cryptocurrencies in everyday transactions, including the purchase of goods and services, raises significant regulatory challenges from a tax standpoint. This question aims to determine whether there are specific tax regulations that explicitly address these types of transactions. It is crucial to understand if such exchanges are recognized as taxable events and how they are incorporated into the tax framework.

In jurisdictions where specific regulations exist, it is critical to analyse how these transactions are valued for tax purposes. The valuation process is particularly challenging due to the volatile nature of cryptocurrencies, which can lead to fluctuating tax liabilities for both consumers and businesses. Additionally, the regulatory framework must address the potential for tax evasion and avoidance, ensuring that anti-abuse measures are robust, applicable and effective in the context of these transactions.

Q2.	In the absence of specific regulations, how does the tax system treat the use of non-cash assets as a means of payment for goods and services?

Background and rationale

In the absence of specific regulations for cryptocurrency transactions, these are often treated under the general tax rules applicable to barter exchanges. This approach raises several questions about how effectively current tax legislation captures the complexities of using cryptocurrencies as a means of payment for goods and services.

Key considerations include whether these exchanges are recognized as taxable events. For transactions between businesses, it is crucial to determine how such transactions impact the calculation of taxable income and the potential for deductions. This analysis must address how the value of the exchanged cryptocurrency should be assessed at the time of the transaction, i.e., at the moment when payment is accepted or the goods or services are delivered, to ensure consistent tax treatment. Additionally, for transactions involving individuals, it is important to consider the implications on personal income tax obligations and compliance requirements.

Modifying existing regulations to better address these exchanges could help reduce tax arbitrage opportunities and ensure a more equitable tax system. Such modifications should aim to clarify valuation methodologies, enhance reporting requirements

and ensure that tax obligations are fulfilled accurately by all parties involved in such transactions.

Q3.	What are the current reporting and documentation requirements for businesses when non-cash assets are received as payment?

Background and rationale

The effectiveness of existing tax provisions relies heavily on the adequacy of general reporting requirements to capture the details of transactions involving non-cash assets. It is essential that there is clarity as to what information must be documented at the time of transaction for businesses and other taxpayers to meet compliance standards and ensure accurate tax reporting. This includes the valuation of the asset received, the identification of the parties involved, and the nature of the goods or services exchanged.

Evaluating whether the current framework for reporting and documentation is robust enough to handle the complexities of cryptocurrency transactions is crucial. This evaluation should consider if enhancements are needed to provide clearer guidance to businesses on how to properly document these transactions to protect the tax base. Potential improvements might include specific requirements for recording the value of cryptocurrency transactions at market rates at the time of the exchange and ensuring this information is readily auditable.

This analysis aims to determine if existing measures are sufficient to mitigate risks such as underreporting and tax evasion, or if new strategies are required to better integrate cryptocurrency transactions into the tax system, enhancing transparency and compliance.

Risk 3.3.4: Payment of crypto-currency as remuneration

The use of cryptocurrencies as a form of wage payment has various tax implications. The following questions evaluate how remuneration paid in cryptocurrencies are regulated, focusing on their tax treatment compared to other non-cash forms of remuneration. It explores whether these payments are explicitly recognized and governed under current tax laws, how they are valued for tax purposes and their impact on social security and payroll taxes. The objective is to assess if the existing frameworks ensure equitable and consistent tax compliance for both employers and employees, aligning with the broader tax policy goals.

Refer to the cryptocurrency exchange questionnaire for the first three questions.

Please complete the three questions listed in the cryptocurrency exchange questionnaire above before proceeding with the following questions, as they are crucial for setting the necessary context for discussing the payment of cryptocurrency as remuneration.

Q1.	Is remuneration paid in cryptocurrency currently expressly regulated for tax purposes?

Background and rationale

The rapid adoption of cryptocurrencies as a medium of exchange includes their use for compensating employees, which presents new challenges for tax regulation. This question addresses whether there are specific laws or regulations that explicitly govern the taxation of remuneration paid in cryptocurrencies. In jurisdictions where such regulations exist, it is crucial to examine the details of these rules. This includes how tax laws categorize cryptocurrency remuneration, whether as akin to monetary income or as a form of property or fringe benefit.

Understanding the regulation is essential for ensuring that both employers and employees are clear about their tax obligations. This includes how such remunerations are reported, valued for tax purposes and what deductions might be available to employers. Additionally, it's important to consider the consistency of these regulations with the overall tax policies in place, ensuring that they do not create loopholes or unintended tax advantages or compliance burdens. The aim is to assess whether current regulations have adequately addressed the challenges of cryptocurrency in the employment context.

Q2.	In the absence of specific regulations, is remuneration paid in non-cash assets currently considered taxable income for the worker, and are they deductible for the employer? How is this non-cash remuneration valued?

Background and rationale

In the absence of explicit regulations addressing the use of cryptocurrencies and other non-cash assets as a form of wage payment, these transactions often fall under general tax rules applicable to non-cash compensation. This scenario raises significant questions about how such forms of payment are treated for tax purposes, both for the employee and the employer.

Firstly, it is crucial to determine whether remuneration paid in non-cash assets are considered taxable income for the employee. This typically depends on the asset's fair market value at the time of payment, which can be particularly volatile for cryptocurrencies, presenting unique challenges in accurate taxation and reporting.

For employers, the deductibility of non-cash remuneration is another critical issue. This involves whether such remuneration can be treated similarly to cash remuneration for purposes of business expense deductions, and how the value of the non-cash payment is calculated for these deductions.

Valuation of non-cash remuneration is often complex, requiring a consistent and fair method to determine the market value at the time of the transaction. Without specific guidelines, there can be considerable ambiguity and potential for inconsistent

tax treatment. The general approach involves using reasonable valuation methods that reflect the asset's true value, which can be difficult with assets that have fluctuating prices like cryptocurrencies.

Lastly, the effectiveness of existing regulations in preventing tax arbitrage requires thorough examination. It is essential to assess whether the rules are stringent enough to prevent businesses and employees from exploiting the volatility of cryptocurrencies to minimize tax liabilities. This analysis will help determine if legislative adaptations are needed to better encompass the unique aspects of cryptocurrency wage payments and ensure they are treated equitably within the tax system.

Q3.	What impact does the payment of remuneration in non-cash assets have on social security contributions and other payroll-related taxes in the application of existing law?

Background and rationale

The payment of remuneration in non-cash assets, including cryptocurrencies, raises critical questions regarding their impact on social security contributions and other payroll-related taxes. These laws may presume wage payments in cash, and the payment of non-cash assets may cause complications. The main challenge is accurately determining the cash equivalent value of these non-cash payments at the time they are made, which is essential for calculating tax liabilities correctly.

One major concern is the fluctuating value of cryptocurrencies and how this affects payroll taxes. The inherent volatility of cryptocurrencies can result in substantial fluctuations in value, potentially leading to issues with over or underpayment of taxes and contributions. This lack of clarity can inadvertently expose businesses and taxpayers to risks of non-compliance and the potential for penalties.

This scenario highlights the need for regulatory clarity and possibly, the development of new legal provisions, to better accommodate the unique characteristics of cryptocurrencies used as wage payments. Understanding the implications of current laws and their application to digital currencies is crucial for ensuring equitable treatment in the taxation system and maintaining the integrity of social security and other payroll-related contributions.

Risk 3.4: Business using cryptoassets

As the landscape of cryptoassets continues to evolve, businesses are finding innovative ways to incorporate these digital assets into their operations beyond merely trading them as financial instruments. A thorough analysis can determine whether the current tax framework is adaptable enough to address the diverse ways in which cryptoassets are used, while maintaining consistency in the application of tax laws, or if these business models require a distinct and specific tax treatment.

Business using cryptoassets questionnaire

(Preliminary questions for Risks 3.4.1–3.4.2)

Given that Risks 3.4.1 – 3.4.2 all concern the broad issue of the use of cryptoassets in business models that do not involve trading of cryptoassets, there is a common set of questions - the business using cryptoassets questionnaire - that should be answered when considering any of those risks. These questions provide the background for examining more specific situations when considering the various crypto tax risks later.

Q1.	What is the current treatment in tax legislation for pre-paid instruments, vouchers, or similar items that grant future access to goods or services?

Background and rationale

In many jurisdictions, the tax treatment of pre-paid instruments, vouchers and similar items that grant future access to goods or services is well-established. These instruments are commonly used in various industries, ranging from retail gift cards to pre-paid subscriptions.

Tax legislations often address diverse aspects of transactions using vouchers or similar instruments. One of the primary considerations is when and how the revenue is recognized for income tax purposes. For instance, revenue may be recognized at the time the voucher is sold or when it is redeemed, depending on the jurisdiction's tax principles. This also affects how these instruments are reported and taxed, particularly if they are treated as liabilities until the goods or services are delivered.

Another critical aspect is the valuation of these instruments, especially when they are issued at a discount or are redeemable for goods or services whose value may change over time. Clear guidelines are necessary to ensure that the tax treatment reflects the economic reality of the transaction, preventing either premature taxation or undue deferral of tax liabilities.

This question aims to explore how jurisdictions currently treat vouchers and similar instruments and to assess how well these rules might adapt to new and emerging business models that incorporate cryptoassets serving similar functions. Understanding this is essential for addressing more specific questions that will be presented later.

Q2.	How does your jurisdiction typically determine the tax treatment for bundled products or services that combine different types of goods (e.g., physical and digital)?

Background and rationale

The taxation of bundled products or services that combine different types of goods, such as physical and digital items, presents some complications. It is important to understand how existing tax laws approach these hybrid offerings, particularly in terms of allocating value between different components and the timing of revenue recognition.

One of the key considerations is how the current legislation determines the allocation of the overall price of the bundle among its different components for income tax

purposes. This allocation is important because different components may be subject to different tax treatments, depending on their nature. For instance, physical goods and digital services might be taxed under different rules, which makes accurate allocation essential to ensure the correct amount of tax is collected. Related to this, another relevant issue is whether the components of the bundle are treated as a single transaction or if they are separated for tax purposes. The current tax framework's ability to address these issues effectively is critical to maintaining consistency in tax treatment.

Understanding how the existing legislation handles these complexities is essential to addressing more specific questions related to the treatment of bundled products or services that include cryptoassets. This foundational knowledge will help ensure that any future guidance or regulations are built on a solid understanding of how these transactions are currently managed.

Risk 3.4.1: Cryptoassets used as vouchers

Utility tokens are increasingly being designed to function similarly to traditional vouchers, making it essential to evaluate existing tax legislation to ensure that these digital assets receive appropriate tax treatment. In many jurisdictions, there may be no specific legislation addressing the taxation of utility tokens, raising questions about whether existing rules for traditional vouchers can be applied. The primary tax concerns revolve around how and when revenue is recognized and whether the current rules adequately address the unique characteristics of utility tokens. This analysis is crucial to prevent inconsistencies in tax treatment and to ensure that the principles applied to utility tokens are both fair and effective.

Refer to the business using cryptoassets questionnaire for the first two questions.

Please complete the three questions listed in the business using cryptoassets questionnaire above before proceeding with the following questions, as they are crucial to providing the necessary context for discussing the topic of cryptoassets used as vouchers.

Q1.	Does your jurisdiction's tax legislation specifically address the treatment of utility tokens when used as vouchers?

Background and rationale

Utility tokens can function similarly to traditional vouchers, allowing users to pre-purchase access to goods or services within a specific platform or ecosystem. The rapid growth of blockchain technology and the integration of utility tokens into various business models have outpaced the development of specific tax legislation in many jurisdictions. However, in jurisdictions with specific tax legislation, it is crucial to understand whether and how these rules apply to utility tokens and to analyse if they are both comprehensive and effective.

A robust legal framework should address several key aspects to ensure that utility tokens are treated appropriately for tax purposes. The timing of revenue recognition is a critical aspect of tax policy, as it determines when income is recorded and taxed. When utility tokens are issued but not yet redeemed, it is important that the legislation provides clear instructions on how and when this revenue should be recognized.

Another critical element is the clear definition and classification of utility tokens when used as vouchers. It is essential that legislation precisely defines these tokens and distinguishes them from other types of cryptoassets. This clarity helps ensure the correct application of tax rules and prevents misclassification, which could lead to inconsistencies in tax treatment.

Additionally, the valuation of utility tokens is a crucial consideration. Since these tokens may fluctuate in value before they are redeemed, legislation must establish guidelines for how they should be valued at different stages. This is particularly important for determining the correct amount of income to recognize and tax, ensuring that the tax treatment reflects the economic reality of the transactions.

Effective legislation must also include anti-avoidance measures to prevent the use of utility tokens as a means to defer or avoid tax liabilities. These rules should address potential loopholes and abusive practices that could undermine the integrity of the tax system.

Moreover, the tax treatment of utility tokens should be consistent with broader financial regulations and digital asset policies within the jurisdiction. This alignment promotes regulatory coherence, reduces the risk of arbitrage and ensures that the tax rules are integrated into the overall legal and economic framework.

To determine whether such legislation is effective, it is necessary to evaluate whether these elements have been successfully integrated and applied in practice. An effective law should provide clarity and certainty to both taxpayers and tax authorities, reducing the potential for disputes and ensuring that the taxation of utility tokens aligns with their underlying economic substance.

Q2.	In cases where there is no specific legislation, how does the treatment of traditional vouchers apply? Could these rules be applicable to utility tokens?

Background and rationale

In many jurisdictions, there may not be specific tax legislation addressing the treatment of utility tokens when they function as vouchers. In such cases, it becomes essential to determine whether the general tax rules applicable to traditional vouchers can be effectively applied to utility tokens that serve a similar purpose. This analysis is crucial because it establishes whether existing frameworks can be adapted to cover the unique aspects of utility tokens or if there is a need for more tailored legislation.

In this analysis, it is important to consider several critical factors that could impact the effectiveness of the application of the existing law. One of the primary considerations is the timing of revenue recognition and the treatment of deferred revenue.

Valuation is another key issue, as utility tokens may fluctuate in value between the time they are issued and when they are redeemed. The effectiveness of existing anti-avoidance measures should also be considered, as it is important to thoroughly review whether these measures adequately prevent the use of utility tokens to defer or avoid tax liabilities.

Risk 3.4.2: Cryptoassets as a product component

As the use of cryptoassets expands, businesses are bundling these assets with non-crypto products or services, creating hybrid offerings that combine both digital and conventional goods. This blending of digital and traditional components raises tax questions, particularly regarding how the crypto component should be treated within the existing tax framework. To ensure that tax rules are applied appropriately and consistently, it may be necessary to review the existing tax legislation to accommodate these hybrid business models.

Refer to the business using cryptoassets questionnaire for the first two questions.

Please complete the three questions listed in the business using cryptoassets questionnaire above before proceeding with the following questions, as they are crucial to providing the necessary context for discussing the topic of cryptoassets as a product component.

Q1.	Does the tax legislation specifically address the treatment of cryptoassets when they are bundled with non-crypto products or services?

Background and rationale

As cryptoassets become more integrated into business models, companies are increasingly offering them as part of bundled packages that include both digital and non-digital products or services. For example, a business might sell a physical product along with an accompanying non-fungible token (NFT). In jurisdictions with specific tax legislation on this issue, it is crucial to assess whether these rules adequately cover the complexities of bundling cryptoassets with other products or services, and to determine if they provide comprehensive and effective guidance for such hybrid models.

One of the primary issues is the valuation of the crypto component. Accurate valuation is essential for determining the correct tax liability. However, the value of cryptoassets can be highly volatile, and their market value may differ significantly from the value of non-crypto products in the bundle. Legislation must therefore provide clear guidelines on how to value the crypto component, ensuring that the tax treatment reflects its actual fair market value at the time of the transaction. In addition to valuation, the timing of revenue recognition is another important element, particularly in cases where the crypto component might not be delivered or utilized immediately. Ideally, rules outline when revenue from the sale of such bundled packages would be recognized for tax purposes. Furthermore, effective tax legislation should

include provisions that address potential anti-avoidance measures. Hybrid business models that bundle cryptoassets with other products could be used to exploit gaps in the tax code, deferring or reducing tax liabilities in ways that were not intended by lawmakers.

Overall, this question seeks to examine whether current specific tax legislation effectively addresses the key elements related to bundled offerings that include cryptoassets, in order to determine if both the crypto and non-crypto components of these hybrid packages are subject to appropriate and consistent tax treatment.

Q2.	In the absence of specific legislation, how would cryptoassets be treated for tax purposes when they are bundled with non-crypto products or services under general tax legislation?

Background and rationale

In many jurisdictions, specific tax legislation addressing the integration of cryptoassets into bundled product offerings does not exist. This absence of targeted regulation raises the question of whether the general tax rules or those applied to traditional bundled products can adequately cover the complexities introduced by cryptoassets. Understanding how these existing rules apply to hybrid models that combine both digital and non-digital components is crucial for ensuring fair and consistent tax treatment.

One of the key considerations in applying existing tax rules to such hybrid offerings is determining whether the crypto component should follow the tax treatment of the non-crypto component or if it should be analysed separately. This distinction can impact the tax treatment and may enlarge the risk of either overtaxation or undertaxation. Additionally, it is important to consider whether existing rules can effectively address other key issues, such as the timing of revenue recognition and the potential for tax avoidance.

This analysis will reveal gaps in existing law and whether adaptations or modifications, or even additional legislation, may be best suited to ensure that the crypto and non-crypto components of hybrid offerings are treated consistently within the tax system.

Appendices

The focus of this toolkit is on the risks which cryptoassets pose for tax systems. A lengthy discussion on the background of cryptoassets could thus be distracting from the main point. However, the taxation of cryptoassets is a highly technical field, focusing on key features of these assets in order to understand the nature of crypto transactions and how orthodox tax rules apply to them could be helpful. To this end, this appendix will cover (I) the various technical terms used throughout the toolkit, (II) the underlying technology that is used through cryptoassets, (III) international exchange of crypto information mechanisms and (IV) domestic examples of crypto reporting legislation.

I. Definitions

a. Cryptoassets

Cryptoassets are a subset of digital assets. The term "cryptoassets" is generally used to refer to digital financial assets (also known as digital tokens) which are based on distributed ledger technology,[94] though there is no universally accepted definition at the moment. Guidance may be taken from the definitions offered by several leading international exchange of information initiatives. The OECD Crypto-Asset Reporting Framework (CARF) defines "cryptoassets" as "a digital representation of value that relies on a cryptographically secured distributed ledger or a similar technology to validate and secure transactions".[95] The European Commission's MiCA defines them as "a digital representation of a value or of a right, which is able to be transferred and stored electronically, using distributed ledger technology or similar technology".[96] Finally, the FATF uses the term "virtual assets" instead, defining them as "a digital representation of value that can be digitally traded, or transferred, and can be used for payment or investment purposes".[97] It is noted that all three definitions are broadly framed and not restricted to representations of value using distributed ledger technology specifically. The CARF and MiCA definitions refer to "similar technology", while the FATF recommendations do not refer to any specific technology at all.

b. Digital tokens

Technically a subset of cryptoassets, digital tokens are generally synonymous with the former in most cases. Cryptocurrencies are a subset of digital tokens which are

94 Bacon and others, "Blockchain demystified: A technical and legal introduction to distributed and centralised ledgers" (see footnote 3).

95 OECD, *Crypto-Asset Reporting Framework* (see footnote 10), Section IV(A)(1).

96 Regulation (EU) 2023/1114 (see footnote 12).

97 Glossary of the FATF recommendations. See FATF, *Updated Guidance for a Risk-Based Approach to Virtual Assets and Virtual Asset Service Providers* (see footnote 13), p.109.

intended to be used as a medium of exchange and thus, are also known as "payment tokens". These payment tokens are one of three main classes of digital tokens, with utility tokens and security tokens being the other two main classes. The terms, as used above, are consistent with the general understanding of the concepts for the purposes of securities regulation and guidance issued by tax authorities. However, in a strict technical sense, the ways the terms are used in these two contexts are not exactly correct.

A "token" is technically a form of digital asset that is built on the infrastructure of an existing blockchain (using what is colloquially known as "smart contracts"), while a "coin" is a form of digital currency that often has its own blockchain (the term in common usage is "native to a blockchain"). Given these highly technical definitions, digital tokens are arguably much more restrictive in their scope as compared to cryptoassets. Further, most cryptocurrencies are actually coins rather than tokens, making the label "payment token," strictly speaking, inaccurate. That said, this toolkit approaches the issue from a policy and pragmatic standpoint rather than a strict technical one. As much of the existing regulatory frameworks[98] (in securities regulation) and guidance from tax authorities[99] does not draw a hard distinction between coins and tokens,[100] this toolkit will also not maintain that hard distinction. It is noted that some jurisdictions (such as Singapore) have even defined the term "digital payment token" in their tax legislation to clearly include cryptocurrencies.[101]

c. Decentralized autonomous organizations

A decentralized autonomous organization (DAO) is an entity created by the deployment of autonomous and self-executing software running on a distributed ledger or blockchain, allowing participants to manage resources in a decentralized manner based on rules encoded in the software.[102] Unlike traditional corporations, which depend on formal legal structures and centralized management, DAOs attempt to function in a decentralized fashion, often without centralized intermediaries or

98 Swiss Financial Market Supervisory Authority FINMA, "FINMA publishes ICO guidelines", press release, 16 February 2018.

99 See, for example, OECD, *Taxing Virtual Currencies*: *An overview* of *Tax Treatments and Emerging Tax Policy Issues* (Paris, OECD Publishing, 2020); Inland Revenue Cryptoassets page available at the New Zealand Inland Revenue website (https://www.ird.govt.nz/); His Majesty's Revenue and Customs (HMRC) internal manual, Cryptoassets Manual, available at Gov.UK website (https://www.gov.uk/).

100 The Australian Taxation Office does expressly note that "a token is a unit of value on a blockchain that usually has some other value proposition besides just a transfer of value". See Australian Taxation Office Crypto Assets Glossary available at the Australian Taxation Office website (https://www.ato.gov.au/).

101 See Singapore, Singapore Goods and Services Tax Act 1993, Part 1, 2A (revised edition 31 December 2021), available at Singapore Statutes Online (https://sso.agc.gov.sg/).

102 Andrea Bonomi, Matthias Lehmann and Shaheeza Lalani, eds., "Blockchain and private international law", in *International and Comparative Business Law and Public Policy,* volume 4, Andrea Bonomi and Damiano Canapa, eds. (Leiden, The Netherlands: Koninklijke Brill), pp. 553.

institutional structures.[103] The membership of a DAO is generally represented by governance tokens - digital assets that grant holders the ability to propose and vote on changes to the protocol, such as cybersecurity upgrades or even the organization's overall purpose- which are typically tradable, allowing for the broad participation of users from different parts of the world.[104]

DAOs vary in their levels of decentralization and autonomy. Some are fully algorithmic, relying entirely on smart contracts to execute governance decisions, while others depend on individuals or groups to implement changes.[105] Indeed, despite their decentralized nature, many DAOs still require a certain level of centralized coordination, particularly when it comes to managing assets and maximizing returns.[106]

Many DAOs operate outside the scope of traditional legal frameworks, which introduces significant legal uncertainty for members and third parties who interact with them. This legal ambiguity, combined with the pseudonymity provided by blockchain technology, allows DAOs to operate globally, where participants are identifiable only by their public keys rather than their real identities.[107]

d. Decentralized finance

Decentralized finance (DeFi) is an umbrella term that refers to a collection of financial products and services that leverage blockchain technology and smart contracts to provide open, peer-to-peer financial services without the need for intermediaries. DeFi applications strive to decentralize financial services, although the degree of decentralization can vary across different platforms.[108] These applications allow users to engage in a wide range of financial activities, including lending, borrowing, trading and asset management, all conducted in a decentralized manner and governed by code rather than traditional institutions.

DeFi aims to replicate many traditional financial products, such as lending and trading, but with a focus on decentralization. DeFi lending, for example, mirrors market-based lending activities like securities lending and repos, rather than traditional retail banking, as most DeFi loans are collateralized.[109] A key aspect of DeFi is its promotion of these traditionally institutional financial activities to retail users,

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103 World Economic Forum, *Decentralized Autonomous Organizations: Beyond the Hype* (Geneva, Switzerland, 2022), pp. 3.

104 Ibid., p. 5.

105 Ibid., p. 15.

106 Kyung Taeck Minn, "Towards enhanced oversight of 'self-governing' decentralized autonomous organizations: Case study of the DAO and its shortcomings", *Journal of Intellectual Property and Entertainment Law*, vol. 9, No. 1 (Fall 2019), pp. 163.

107 Bonomi, Lehmann and Lalani, "Blockchain and private international law" (see footnote 102), p. 553.

108 The European Union Blockchain Observatory and Forum, *Decentralised Finance (DeFi)*, (24 May 2022), p. 6.

109 OECD, *Why Decentralised Finance (DeFi) Matters and the Policy Implications*, (Paris, OECD Publishing, 2022), pp. 16–17.

allowing everyday individuals to participate in sophisticated financial markets that were previously accessible only to institutional actors.

II. The underlying technology

a. Distributed ledger technology

Cryptoassets rely on distributed ledger technology (DLT), which involve a network of connected computers, each of which individually maintain a record of transactions, and all partake in establishing the current state of the network.[110] This differs from a centralized system, where one main computer is responsible for maintaining a definitive record. As multiple computers on the network are involved, there needs to be a way in which any potential differences in the record are resolved. This is known as a "consensus mechanism" and it lies at the heart of crypto transactions. There are two main categories of consensus mechanisms currently in use: Proof-of-Work (POW) and Proof-of-Stake (POS) schemes, though a wide range of other more uncommon mechanisms also exist.[111]

a.1. Mining

The precise mechanism of a POW scheme is extremely complex,[112] but essentially, computers in the network compete to solve mathematical equations that are difficult to solve but whose solutions can be easily checked.[113] Miners make calculations to verify the transactions and share their results with the network, with the fastest correct miner receiving tokens.[114] Essentially, mining is a mechanism put in place to "pay for" the running of the distributed ledger system and the "costs" are spread amongst the existing owners of the digital token as an increased supply of the token leads to a devaluation of the existing tokens, in a manner akin to inflation. The requirement to expend significant computing power in order to update the ledger makes it uneconomic for a party to simply control the majority of the nodes in the network and make fraudulent amendments to the ledger (in what is commonly known as a 51 per cent attack).[115] The process of solving mathematical equations as a node in the network under a POW mechanism is known as "mining" and successful miners will receive freshly generated tokens as compensation for their efforts.

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110 Vincent Ooi, Soh Kian Peng and Jerrold Soh, "Blockchain land transfers: Technology, promises, perils", *Computer Law & Security Review*, vol. 45, No. 105672 (July 2022).

111 For a comprehensive explanation and evaluation of consensus mechanisms in blockchain see Christian Cachin and Marko Vukolić, "Blockchain consensus protocols in the wild", in *31st International Symposium on Distributed Computing (DISC 2017)*, Andrea Richa, ed. (Wadern, Germany: Schloss Dagstuhl—Leibniz-Zentrum für Informatik, 2017); Wenbo Wang, and others, "A survey on consensus mechanisms and mining management in blockchain networks", *IEEE Access,* vol. 7 (1 March 2019), p. 22328.

112 Ooi, Peng and Soh, "Blockchain land transfers", p. 3–5.

113 OECD, *Taxing Virtual Currencies* (see footnote 18) p, 11.

114 Ibid., p. 11.

115 See Cristopher Koch and Gina Pieters, "Blockchain technology disrupting traditional records systems", *Financial Insights—Dallas Federal Reserve Bank*, vol. 6, Issue 2 (July).

a.2. Forging

The highly resource-intensive nature of POW schemes led to the creation of less computationally expensive POS schemes. Once again, the precise mechanism is extremely complex,[116] but essentially, existing holders of tokens "vote" to validate transactions by placing a "deposit" and thus "staking" their tokens. The deposit can be forfeited if the node is found to have engaged in errant behavior that threaten the integrity of the ledger.[117] While the nodes still maintain and verify the ledger, no mathematical equations need to be solved. This process is known as "forging" and successful forgers will likewise receive freshly generated tokens as compensation for their efforts.

b. Wallets and the issue of pseudonymity

There is an apparent contradiction with cryptoassets in that while a public blockchain ensures that transaction records of cryptoassets are generally replicated in a large number of ledgers on many different nodes, ensuring maximum transparency, there is also talk of difficulties in identifying the parties behind crypto transactions. How then can there be a challenge with identifying taxpayers if the transaction history of cryptoassets is practically in the public domain? The answer lies in the pseudonymous nature of cryptoassets. As a starting point, pseudonymity is conceptually different from anonymity. In the case of the latter, a party acts in a way that makes it unidentifiable. The same party could perform the same action multiple times and there would be no way of knowing that it was the same person. In the case of the former, however, a party acts in a way in which they can be identified, but there is a mask or shield which conceals their identity outside the system in which they are acting. So, everyone might know that the same person performed the same act thrice, but they have no information who that person might be.

The "wallets" which store private keys (and thus, control over tokens) are unique and identifiable. It is public information what transactions a particular wallet is involved in and it is also possible to trace the flow of tokens (i.e., the changes in ownership) from wallet to wallet. However, all this information is of little use in uncovering the ultimate beneficial owner behind a wallet. The wallets themselves do not contain any information that could identify their owners. Pseudonymity in this context means that one can know the entire transaction history of a particular wallet but be unable to uncover the true identity of the owner of the wallet. Several global initiatives[118] are

116 Ooi, Peng and Soh, "Blockchain land transfers" (see footnote 110), p. 5.

117 To be precise, the staked tokens will be forfeited if a node violates either one of two "slashing conditions" which are: 1) a validator must not vote simultaneously for two blocks at the same target height and 2) a validator must not vote within the span of its other votes. See Vitalik Buterin, "A next-generation smart contract and decentralized application platform", Ethereum.org, 12 January 2014; and Vitalik Buterin and Virgil Griffith, "Casper the friendly finality gadget", arXiv, 2017, arXiv:1710.09437 (25 October 2017).

118 For example, OECD, *Crypto-Asset Reporting Framework* (see footnote 10); European Union, Regulation (EU) 2023/1114 (see footnote 12); and FATF, *Updated Guidance for a Risk-Based Approach to Virtual Assets and Virtual Asset Service Providers* (see footnote 13).

now underway to extend the current international exchange of information framework to cryptoassets as well, placing the burden on intermediaries who assist with crypto transactions to conduct know-your-client checks and collect information on the ultimate beneficial owners behind wallets. However, the inherent pseudonymity of cryptoassets means that there will inevitably be gaps in the information gathered, since not all users will go through a regulated intermediary.

III. International exchange of crypto information mechanisms

Crypto-Asset Reporting Framework

The Crypto-Asset Reporting Framework (CARF)[119] is one of three leading international exchange of crypto information mechanisms, the other two being the European Commission's Directive on Administrative Cooperation (DAC8)[120] and the FATF guidance on virtual asset service providers.[121] While it draws heavily from the Common Reporting Standard (CRS), it is a separate and complementary framework put in place to address the gaps in reporting under the CRS, which does not cover many forms of cryptoassets.

The focus of the CARF is on Reporting Crypto-Asset Service Providers (RCASP), ensuring that they collect and send crypto information to tax administrations at a domestic level. The information can then be exchanged with other jurisdictions internationally. RCASPs are defined as any individual or entity that, as a business, provides a service effectuating exchange transactions for or on behalf of customers, including by acting as a counterparty, or as an intermediary, to such exchange transactions, or by making available a trading platform.[122]

There are three main types of transactions which RCASPs are required to report: 1) exchanges between relevant cryptoassets and fiat currencies; 2) exchanges between one or more forms of relevant cryptoassets; and 3) transfers (including Reportable Retail Payment Transactions) of relevant cryptoassets.[123] RCASPs must provide the following information about the relevant reportable persons: 1) the person's name, 2) address, 3) jurisdiction of tax residence, 4) TIN and 5) date and place of birth.[124]

Other information about the relevant transactions must also be provided such as: 1) the full name of the relevant cryptoassets; 2) any acquisitions and disposals of the cryptoassets (whether exchanged for fiat currency or other cryptoassets); 3) retail

119 OECD, *Crypto-Asset Reporting Framework*.

120 Council Directive (EU) 2023/2226 of 17 October 2023 Amending Directive 2011/16/EU on Administrative Cooperation in the Field of Taxation (DAC8).

121 FATF, *Updated Guidance for a Risk-Based Approach to Virtual Assets and Virtual Asset Service Providers*.

122 OECD, *Crypto-Asset Reporting Framework*, p. 19.

123 Ibid., pp.14, 22–23, and 31–36.

124 Ibid., Section II(A) of the CARF Rules, pp.18–19.

payment transactions; and 4) other transfers of cryptoassets.[125] The reporting is to be done on an aggregate basis by type of transactions, distinguishing between: 1) outward and inward transactions, 2) crypto-to-crypto transactions and 3) transfer types. The reporting should be done in a fiat currency. If fiat currency were not used in the transaction, the reportable value should be based on the market value of the relevant asset at the time of the relevant transaction.[126] It should be noted that the reporting requirements for retail payment transactions apply only to transactions exceeding a threshold of US$50,000.

The CARF consists of three distinct components: 1) Rules and related commentary that can be transposed into domestic law to collect information from RCASPs; 2) A Multilateral Competent Authority Agreement on Automatic Exchange of Information pursuant to the CARF (CARF MCAA) and related commentary and 3) An electronic format (XML schema) to be used by competent authorities for purposes of exchanging the CARF information, as well as by RCASPs to report CARF information to tax administrations (yet to be finalized).[127]

In 2024, the OECD published a guide for jurisdictions on how to effectively implement the CARF[128]. This guide outlines key steps for jurisdictions to consider, including legal, administrative and operational frameworks necessary for CARF implementation. It also emphasizes the importance of ensuring consistency across jurisdictions to minimize reporting burdens and optimize the use of the CARF.

This toolkit makes reference to the CARF on several occasions for a variety of purposes. For example, it considers the definition of cryptoassets in the CARF, [129] alongside the MiCA and FATF definitions. Alongside other international exchange of crypto information mechanisms, the CARF may also be a useful standard for reference, such as when considering what kinds of information should be collected and submitted to the tax authority by the RCASPs.[130] An international standard can be applied when designing a domestic framework for the reporting of crypto information by centralized and decentralized exchanges. It can also be applied at an international level when exchanging crypto information with other jurisdictions.

Jurisdictions may consider ratifying the CARF if they find that they have the necessary resources and a cost-benefit analysis shows that the benefits outweigh the costs.

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125 Ibid., pp. 31–35.

126 Noked, "Ending the crypto tax haven" (see footnote 32), pp.16–17; and OECD, *Crypto-Asset Reporting Framework,* pp.18–19. Issues of valuation are addressed in pp. 36–38.

127 OECD, *Crypto-Asset Reporting Framework*, p. 12.

128 OECD, *Delivering Tax Transparency to Crypto-Assets: A Step-by-Step Guide to Understanding and Implementing the Crypto-Asset Reporting Framework* (Paris, OECD Publishing, 2024).

129 OECD, *Crypto-Asset Reporting Framework*, Section IV(A)(1) of the CARF Rules, p. 22.

130 Ibid., Section II(A) of the CARF Rules, pp. 18–19.

IV. Domestic examples of crypto reporting legislation

In Australia, the Anti-Money Laundering and Counter-Terrorism Financing Act requires digital currency exchange providers to register with the Australian Transaction Reports and Analysis Centre (AUSTRAC). These providers must report all suspicious matters, high-volume transactions and submit annual compliance reports.

In Canada, taxpayers are required to report cryptoasset transactions, including those that result in business income or loss, or capital gain or loss. Taxpayers must also keep records to support the value of their cryptoassets and related amounts. In addition, the Proceeds of Crime (Money Laundering) and Terrorist Financing Act includes provisions applicable to cryptocurrency exchange platforms, which must register as money services businesses and are subject to reporting requirements for suspicious transactions and transactions above specified thresholds.

Mexico has established reporting obligations for virtual-assets transactions under its Law to Regulate Financial Technology Institutions (Ley para Regular las Instituciones de Tecnología Financiera) and related anti-money laundering provisions. Under this law, a virtual asset is defined as a representation of value recorded electronically and used by the public as a means of payment for all types of legal transactions, and whose transfer can only be carried out through electronic means. Financial technology institutions are required to report transactions with virtual assets exceeding certain thresholds.

In the United Kingdom, the Financial Services and Markets Act includes cryptoassets within the scope of the financial regulatory framework. The legislation established reporting requirements for cryptoasset transactions. In April 2025, draft legislation has been published for technical review, aiming to regulate new types of cryptoasset transactions.

The United States has enacted legislation to expand the reporting requirements in financial transactions to include transactions in cryptocurrency. The 2021 Infrastructure Investment and Jobs Act expanded the Internal Revenue Code's reporting rules that apply to brokers in other types of financial assets to apply to cryptoassets. The law also defined digital assets, and directed the Treasury Department to issue further guidance as to how the law changes would be interpreted. However, proposed regulations to implement the new reporting legislation were only just released in 2023, and having received voluminous comments, will likely need substantial revisions before being finalized.

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