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Copy slightly edited from version submitted on 5 September 2022 to reflect review comments from Dr Elizabeth Morton

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Dear Alex,

Call for Evidence: the taxation of decentralised finance involving the lending and staking of crypto-assets

Thank you for the opportunity to provide a submission on the Call for Evidence. The Call for Evidence is a welcome initiative to clarify the application of existing tax laws and identify the areas for statutory tax reform.

The Call for Evidence was published just before the UK Law Commission's consultation paper on digital assets (**Law Commission Work**). The Law Commission Work relevantly provides that without recognising a third category of personal property to allow for the nuanced and idiosyncratic approach to the legal characterisation of new things, it is difficult to provide well-reasoned, thoughtful and effective prudential, capital markets, tax and other regulations in relation to new objects of property rights. The Law Commission also indicates it will shortly commence a scoping study to explore and describe the current treatment of DAOs under the law of England and Wales.

As such, this submission provisionally supports Option 2 (Separate rules) and Option 3 (No gain no loss) since Option 2 is likely the most appropriate and future-fit to adapt with the proposed statutory, and perhaps eventual common law recognition, of a third class of property. Option 3, with respect to staking and reward arrangements, could be appropriate to align the tax treatment of DeFi staking activities with the concessional tax treatment afforded to early-stage investors to incentivise the allocation of capital to early stage and high-risk innovative ventures. This aptly describes what is really happening with staking arrangements – that is, an incentive arrangement to 'bootstrap' users to an application or blockchain network.

Some observations are set out at Annexure A, with policy recommendations set out at Annexure B, and responses to the consultation questions provided at Annexure C.

This submission is drafted from an Australian tax law perspective, noting that there are similarities but also some differences between the UK tax law and the Australian tax law.

I welcome the opportunity to discuss the recommendations and look forward to seeing the consultation progress.

This submission will be shared and discussed in the 'Taxation of token activities' working group of LawFi DAO with the view that the submission is ratified by the LawFi DAO committee and its members.

Yours sincerely,

Joni Pirovich
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Annexure A Observations

A. Importance of articulate language to accurately describe the relevant factual circumstances to which the law applies

[1] This submission refers to 'ownership of a token' as shorthand and to reflect that several jurisdictions seek to treat tokens as property without providing full legal reasoning to support that view. As alluded to in the Law Commission Work, there has perhaps been an inaccurate or incomplete description of the legal relationship between a person, the tokens they 'own' and a global blockchain network. The case law across jurisdictions shows that courts are willing to recognise tokens as personal property without providing full legal reasoning behind the judgments. This is likely because tokens do not fit neatly into the existing categories of a 'thing in possession' or a 'thing in action', however the common law seeks to provide protection as if tokens are a form of property.

[2] It is likely more accurate not to speak in terms of 'ownership of tokens as property' but rather a 'right to use software for as long as the software is supported'. In a similar way that a person can create and use an email account if that person abides by the terms and conditions set by the email service provider and for as long as that email service provider continues providing the service, that person can only use the tokens they 'own' for as long as the miners (or validators or other type of participant in an alternate consensus mechanism) support the blockchain network that the tokens are compatible with.

[3] Accordingly, and as set out in further detail below, policy that preserves the ability of miners (or validators or other) to continue to support a blockchain network is the critical policy goal that is necessary to support an ongoing or perfection of 'ownership' and preservation of any value of tokens on a blockchain network. In other words, the 'perfection' of 'ownership' in a token graduates by reference to either the geographic dispersion of the blockchain network's miners (or validators or other) and / or the number of jurisdictions with friendly law (rather than unfriendly law) applicable to miners (or validators or other).

[4] However, if a centralised provider is offering a custody or management service for tokens and where they represent themselves as being responsible for their customers' ongoing ability to use the tokens then a person is not dealing with a global blockchain network anymore they are dealing with a centralised provider which gives rise to a 'thing in action'.

[5] Based on the above, the 'perfection' of 'ownership' of tokens is a circumstance driven by geographic dispersion of nodes rather than legal recognition, relies on multiple countries pursuing this same policy goal and establishes that no country can act in isolation to 'perfect' any property right vis-à-vis tokens native to a blockchain network that may exist or be deemed to exist as the common law and/or statutory law reform eventuates. The case may be different for application-level DAOs (sometimes referred to as protocol DAOs) and their token/s.

[6] At any one time, a person has the ability but not necessarily a legal right to use the blockchain ledger software – the ability to use only subsists in a person vis-à-vis the ongoing support for a network. A person's ability to use relies on their access to the private key, where the public-private keypair represents that there is a positive balance to the associated public address recorded per the state of the ledger that a consensus of nodes agree to. In other words, if a person loses access to their private key or the private key is stolen by an unknown actor that person has no legal right against any one or collection of miners (or validators or other) to restore the balance of tokens they claim to have which would require proof from sources other than the ability to use the ledger software with the applicable private key.

[7] The UK Law Commission Work states that the ledger record will be the correct factual record but not necessarily the correct legal record. This statement is poignant and brings into focus legislation introduced by countries such as Luxembourg in January 2021 to give legal status to the ledger record by virtue of legally recognising 'DLT-based issuance accounts' that can be used for the issue of dematerialised securities.[1] In addition, whether the ledger record is the correct factual and legal record is a question tested and being tested with at least one hard fork: the ETH-ETC hard fork in 2016 which followed The DAO attack. The blockchain ledger we refer to as Ethereum Classic records the 'ownership' of stolen ETH (now referred to as ETC post hard fork) to the attacker's public address and the blockchain ledger we refer to as Ethereum does not represent the attacker's 'ownership' of ETH because the Ethereum community acted to implement a contentious hard fork.

[8] Litigation has been on foot in Australia (*ASZ21 v Commissioner of Taxation*) since late 2020 to determine the nature of rights held by a taxpayer prior to and post the ETH-ETC hard fork, with respect to that taxpayer's 'ownership' of ETH pre- and post-hard fork for the purpose of ascertaining the correct application of tax law to the taxpayer's circumstances. The Commissioner of Taxation has commenced a number of interlocutory proceedings such that the substantive property law issues have not yet been heard in court.

[9] Understanding the full factual circumstances informs a proper understanding of the nature of the legal relationship and is a critical first step before the tax treatment can be properly determined or appropriate tax policy developed.

B. Global decentralisation is the policy goal worth protecting

[10] Further to the point made above at A[3], the ability for any miner or validator (or other) to continue to provide support to a blockchain network, and the ability for miners (or validators or other) to be geographically dispersed around the world, may increasingly be impacted by regulation.

[11] For example, the recent (failed) attempt through the European Union to ban bitcoin mining (or rather impose minimum environmental sustainability standards)[2] could have prevented geographic spread of bitcoin miners in EU states. In addition, the recent sanctions by the US Treasury's Office of Foreign Assets Control (**OFAC**) on 38 smart contract addresses associated with Tornado Cash has raised questions about sanctions compliance by miners (or validators or other) and whether a blockchain network can and should be 'resilient' to domestic law (more colloquially, 'censorship resistant').[3] Whichever law is used for the next type of 'influence' upon the borderless technology will be highly controversial, as the preceding examples have shown such legislative and regulatory attempts to be.

[12] The OFAC sanctions upon smart contract addresses evidence that there is a willingness within OFAC to apply the law to a 'non-person', which is novel and may lack validity upon review by a court (if an eligible applicant can bring the matter). To date, there have been no similar efforts by any tax regulator with regard to a DAO or smart contract addresses that are no longer actively governed by a DAO.

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[1] See further: P Degehet, N Doyle, L Lazard, 'New Luxembourg Law allows issuance of dematerialised securities using distributed ledger technology (DLT)' (25 January 2021), available at: https://www.bsp.lu/publications/newsletters-legal-alerts/newsflash-new-luxembourg-law-allows-issuance-dematerialised.
[2] See, for example, E Nicolle and L Pronina, 'EU Crypto Proposal Seen as De-Facto Bitcoin Can Fails in Vote' (15 March 2022), available at: https://www.bloomberg.com/news/articles/2022-03-14/eu-crypto-proposal-seen-as-de-facto-bitcoin-ban-fails-in-vote#:~:text=A%20proposal%20that%20would%20have%20effectively%20banned%20the,pushes%20ahead%20with%20regulation%20of%20the%20fast-growing%20sector.
[3] See, for example, CoinYuppie, 'OFAC sanctions and Ethereum PoS: some technical nuances' (22 August 2022), available at: https://coinyuppie.com/ofac-sanctions-and-ethereum-pos-some-technical-nuances/; and A Thorn, C Kim, C Yu and R Rybarczyk, 'OFAC Sanctions Tornado Cash: Issues & Implications' (10 August 2022), available at: https://www.galaxy.com/research/insights/ofac-sanctions-tornado-cash-issues-and-implications/.

[13] The right or licence to use is only valuable if there is a global network of nodes that continue to support their use of the blockchain ledger software to validate transactions recorded on the ledger. The number of independent nodes and level of global decentralisation is a proxy for the integrity and trustworthiness of the ledger record, and often the value of tokens referable to that blockchain network. The number of accounts and transactions on a blockchain ledger is indicative of the level of trust and desire to transact with that blockchain ledger software and its network over another blockchain ledger software and its network.

[14] Based on the above points, global decentralisation of a blockchain network is a policy goal worth protecting but the right balance must be struck between the protections our existing laws seek to uphold (including tax compliance) and the resilience of a blockchain network. The attempt to enshrine a legal relationship between a person and a node, or a person and many nodes, for legal and / or tax purposes could be a type of 'influence' that a majority consensus of nodes reject and then 'hard fork' to refute what may be deemed an improper 'influence' from the law of one or more countries. However, the legal relationship between a person and a DAO governed protocol may be a less controversial legal and relationship to define albeit not necessarily an easier exercise.

C. Scope of Call for Evidence

[15] The Call for Evidence is limited in scope to investors interacting with DeFi lending and staking and further states as follows:

a. "An individual holding crypto assets and engaging in DeFi transactions is unlikely to be trading."
b. "…no UK tax implications for individuals who are not UK resident but who transact with a UK-based platform."

[16] The first statement is a welcome clarification but requires further detail to be useful for individuals or the tax agents with individual client bases. Without clarification, the typical tax agent is likely to assume an individual engaging in DeFi transactions does so on capital account and would treat tokens used in lending and staking arrangements as capital assets with no disposal or cancellation (or other) tax event, and the returns generated from those activities as assessable income at the time those returns are *derived*.

[17] The second statement is also a welcome clarification but requires further consideration of what constitutes a 'UK-based platform'.

Meaning of 'trading' needs to be clarified with respect to clear categories of DeFi transactions

[18] An individual may not be 'trading' in the commonly understood sense of the word but may meet the common law test of 'venturing the asset into trade for a profit-making purpose' by interacting with DeFi staking and lending protocols once or multiple times.

[19] The common law allows that a profit-making scheme can take many years to complete (*Whitfords Beach*; and more recently *Greig v FC of T* [2020] ATC 20-733). This challenges the general understanding and shorthand application by tax agents and taxpayers that an investment is made on capital account if the intention is to hold that investment for the medium to long-term including where the capital asset can be deployed to revenue producing purposes (i.e. an investment property listed for rent). In this context, it is unclear whether tokens 'staked' or 'lent' to earn token rewards or token returns respectively constitute 'venturing the asset into trade for a profit-making purpose' even if only done once.

[20] Where a token is 'ventured into trade', such action could have the effect of changing a person's holding of the token or tokens from being held on capital account to revenue account, which is itself a tax event. As such, it is unclear whether person that engages with a one or a few DeFi protocols or interacts a few times with one DeFi protocol continues to be an investor on capital account. The corollary is when an individual's token activities are such that that their holding of tokens changes from revenue account to capital account, which is also a tax event.

[21] Furthermore, it is unclear if a person interacts with the same or similar DeFi protocol on two or more blockchains (e.g. Uniswap on Ethereum and Serum on Solana) whether this activity is indicative of a person carrying on a business of token activities ('trading' for short hand) or more akin to a share investor using both the Australian Stock Exchange and the London Stock Exchange to conduct their activities of investing in shares on capital account.

[22] Accordingly, the categories of DeFi staking and lending transactions for which clear guidance about whether a person 'ventures their tokens into trade with a profit-making purpose' include:

a. staking of one class of tokens in a liquidity mining scheme[4] offered by the DAO (e.g. ILV liquidity mining scheme, overseen by Illuvium DAO governance);

b. staking of one class of tokens to increase voting weight, which may also increase rate of token rewards (e.g. veCRV with Curve protocol, overseen by Curve DAO governance);

c. lending tokens to a liquidity pool to receive 'trading fee' token returns (e.g. ETH and COMP in a Uniswap v1, v2 or v3 liquidity pool);

d. lending tokens to a liquidity pool to receive 'trading fee' token returns and the LP token with the intention to stake the LP token in a liquidity mining or staking rewards scheme;

e. lending tokens to a protocol that represents you will accrue token rewards in consideration for your tokens being lent out to another legal person or another protocol; (e.g. Aave and Compound protocols);

f. staking tokens to a protocol that represents you will receive loan proceeds (in tokens) and 'interest' or an 'interest-like' obligation accrues for the duration that the loan is owing and where the tokens are not available for use by other legal persons or another protocol (e.g. Maker protocol);

g. staking of one class of tokens to participate in simple proof of stake (sPoS) (e.g. ETH post-merge);

h. staking of one class of tokens to participate in delegated proof of stake (dPoS);

i. undertaking any of the above activities with more than one class of token; and

j. undertaking any of the above activities on more than one blockchain network.

[23] A chain analytics firm may be able to produce data that estimates the potential tax revenue from assumed UK residents based on various scenarios of tax treatments of the above categories of DeFi transactions.

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[4] I narrowly define a scheme as a liquidity mining scheme where the tokens are distributed for the first time via a contract that is 'pre-loaded' with an undistributed supply of a DAO's native tokens and where the scheme is run for the purpose of attracting a broader global audience because of the incentive of liquidity mining rewards so as to distribute transferable tokens that can be used to express sentiment or cast a vote.

[24] Whilst the categories may be relatively easy to articulate now, the way in which each protocol is designed could substantially impact the application of tax laws such that one protocol in a DeFi category does create one or more tax events whereas others do not.

[25] Tax arbitrage opportunities should be front of mind for the UK HMRC in clarifying the operation of existing law and setting tax policy that attracts innovators to the UK and DeFi users that can sensibly understand and apply tax laws to their DeFi staking and lending activities.

[26] There are also centralised providers that intentionally and unintentionally mislead the public about their level of decentralisation or use of DeFi protocols. Popular examples include Celsius, BlockFi and Nexo. Such providers may have clear terms and conditions that define the legal relationship between them and their customer (e.g. as bare trustee, as agent, as transferee with no obligation to return the principal, etc) but often customers won't read or understand the terms, the terms are not in the customer's interests and are not analogous to the deposit guarantees that go along with a bank savings account. As such, customers have likely unintentionally transferred beneficial 'ownership' of their tokens to the provider and triggered a tax event that they likely have not reserved any fiat currency from which to pay a tax bill.

Time of derivation of token returns or token rewards in DeFi staking and lending arrangements is unclear

[27] There is perhaps more contention amongst tax agents with individual client bases around when staking and lending returns are derived than whether a disposal or cancellation event has occurred on entering the arrangement.

[28] There are several protocols that deliberately challenge the interpretation of 'derived' or seek to defer the time of derivation of token rewards. For example, the HEX protocol and its 'Good Accounting' function.[5] More protocols may copy the 'Good Accounting' function or implement 'upgrades' with the intention that a person does not derive assessable income at the time token rewards accrue or are claimable.

The user experience does not clearly suggest there should be one or more tax events on staking or lending

[29] Often it does not make economic sense to the lay person interacting with smart contracts via a simplified user interface that there has been a disposal (or multiple) or cancellation of 'ownership'. A number of taxpayers would not realise that their ETH is converted to WETH by the wrapping contract in a number of Ethereum-based protocols, which at least the Australian Taxation Office appears to be treating as a disposal event.

[30] The language of the tax statute and common law requires that there be 'ownership' and where a tax event typically arises when beneficial ownership is transferred or cancelled. As set out in Annexure A the 'perfection' of a person's 'ownership' of tokens native to a blockchain network subsists vis-à-vis an active network of independent nodes that agree to the state of the ledger. In this regard, a person's 'ownership' could in effect be cancelled or destroyed or changed if the blockchain network becomes progressively centralised and does not maintain its sufficient global decentralisation. The everyday taxpayer is not equipped to maintain such an ongoing assessment of each blockchain network, nor will they necessarily understand whether a token is a native blockchain token (such as BTC, ETH, AVAX, or SOL) versus an application-level token (such as COMP, UNI, MKR, CRV).

[5] See, for example, Howtopulse.com, 'Hex: End Staking v Good Accounting' (2 January 2022), available at: https://www.howtopulse.com/end-staking-vs-good-accounting/.

[31] Since a person's 'ownership' of tokens is not equal to having 'rights in action against any recognised legal person', the legal analysis must necessarily be more fluid and focus on a person's activity with a token or protocol rather than each transaction recorded to the blockchain ledger. The 'rights' only crystalise during a person's interaction with the blockchain, to either transfer tokens to another public address or interact with a contract (which includes DeFi staking and lending activities). In this regard, despite that a token may be burnt or sent to a zero address or sent to a lock/escrow address (which is a transaction recorded to the ledger) the tax treatment of the person's interaction with each individual contract within a protocol is not a standalone transaction and should not be looked at separately when it is part of a bundle of transactions that make up an arrangement.

[32] I refer you to my recent article published in the Australian Tax Review, 'Shifting to More Equitable and DAO-based Global Economies: The Case for Micro Auto-taxing Standards and a Framework for Auto-tax Revenue-sharing' (2021) 50 AT Rev 22. The article provides an analysis of possible tax treatments of a person's lending of tokens to a liquidity pool to receive LP tokens and trading fee accrual and highlights the complexity of analysis involved in determining the tax treatment of a person's interaction with one DeFi protocol. Individual taxpayers should not be exposed to this level of complexity, and cannot afford the tax advice for one DeFi protocol let alone multiple.

'No gain no loss' treatment worthy of tax policy consideration

[33] The 'no gain no loss' recommendation is supported for staking arrangements because a person's purchase of tokens with the intention to stake and earn the returns (where the schemes are often marketed as 'liquidity mining' or 'staking rewards' or 'incentivised pools') is the intended behaviour sought from token projects 'bootstrapping' the expansion of their network or users through such early-stage incentives.

[34] If the token project does not garner enough of a network and liquidity pools of sufficient depth in its early stage, the protocol may not have enough value transacted through it or locked to it to test and prove its function and resilience. If such a network has not grown from the first few months to a year of a blockchain or protocol being released with its incentive scheme, it may not have good enough or better utility than already exists or it may just be a ponzi scheme.

[35] It is exactly this testing that occurs in the early phases of a token incentive scheme being on offer that is required of protocols to experiment and push innovation forward. What is often not understood by everyday taxpayers is that the 'whales' (persons with large token holdings) will test a new blockchain network or protocol with a small amount of tokens before using large amounts. Once 'whale' wallets trust a blockchain or protocol, this is industry shorthand for an increased level of trust in a blockchain or protocol that means use and utility will likely continue after the token incentive scheme is exhausted. The collapse of UST and LUNA is a recent example of this – the token incentives offered by staking with Anchor protocol were lucrative but showed that more needed to be done, or different activities were required, to accelerate the growth of the network of individuals and businesses transacting with UST to a level that new users weren't simply attracted by the staking incentives but rather a large community of UST users.

[36] Everyday people attracted to such incentives may not be able to afford to risk more than A$5,000 to A$10,000, maybe less, but they should be empowered to choose based on being properly informed about the risk. The 'no gain no loss' tax policy could also be an opportunity to highlight the early stage and high-risk nature of the token project and its incentives.

[37] From a tax policy perspective, the UK HMRC should investigate whether the evolution of token incentives to attract a user base to a blockchain-based start-up should be treated as assessable income.

Proposed framework to support analysis of appropriate basis of taxation for DeFi lending arrangements

[38] The HMRC should consider developing a framework to distinguish 'Account to Contract' arrangements where a person initiates and signs a transaction from their digital wallet (referred to as an 'account' in blockchain parlance) to transfer tokens to a smart contract, from 'Account to Contract to Account' and 'Account to Contract to Contract' arrangements. In the former category, a person's ongoing economic ownership of a token is typically clear; in the latter two categories, a person's tokens are put at risk by their availability for use by other people or by automations, respectively.

[39] Further work is required to ascertain the appropriate tax treatment and tax reform for the latter two categories. A chain analytics firm could assist with analysis of available data to determine potential tax revenue gained or lost from the UK adopting various tax treatments.

D. Individual tax treatment is a helpful starting point for tax treatment of funds investing in tokens

[40] Several comments in this submission are directed at the potential tax treatment for individuals but often the tax analysis is similar for funds with trust structures that are expected to increasingly allocate capital to tokens that can be used in lending and staking arrangements. The tax revenue impact at the individual level may not be as material as it is at the fund level; however is a useful starting point to discuss relevant clarifications required for the allocation of capital through fund structures which will be distributed to individuals.

UK-based platform

[41] The Call for Evidence excludes from scope the tax treatment of transactions entered into by an individual or entity as part of a trade, such as running a platform.

[42] The bar could be very low for 'running a platform' and is worthy of clarification. For example, a person can engage with fractional.art to fractionalise the shares to profits on sale of an NFT in a set number of fungible tokens and then seed a liquidity pool on Sushiswap protocol with ETH and the ERC-20 tokens referable to the NFT for auction. This can be set up in a matter of minutes and whilst perhaps the person is not running either fractional.art or sushiswap (if they as Ethereum based protocols are platforms), the person could arguably be running a business via a platform which would be relevant for tax purposes.

Annexure B Policy recommendations

A. The legal and tax characterisation of the DAO that is referable to the DeFi protocol is required before the tax treatment of DeFi activities can be properly determined

[1] The completion of the Law Commission's proposed scoping study to explore and describe the current treatment of DAOs under the law of England and Wales is crucial to inform the appropriate application of existing tax law and tax reform required.

[2] The full facts of the scheme and the actual legal rights and obligations (or representations about such rights and obligations) created from a person's interaction with a DeFi protocol must be understood before the tax treatment of a person's interaction with a DeFi protocol can be determined. This can be a very difficult exercise for even the most experienced practitioners because often a white paper does not describe in plain language how the protocol operates. For example, often the white paper does not mention that the wrapping contract is required in the suite of smart contracts that make up a protocol but for tax purposes some tax authorities consider the exchange of ETH to WETH a tax event (although the position has not been supported by comprehensive legal reasoning).

[3] In addition, the facts of the scheme can change where DeFi protocols are governed by DAOs which a person may or may not be aware of. For example, how does the legal relationship and arrangement change if a vote is approved by the DAO members to deploy a version 2 of the protocol and where the user interface will only support version 2, version 1 is no longer supported by the DAO and where version 1 continues to be available for persons to access by interacting directly with the blockchain protocol. Lack of active governance by a DAO could arise because there are insufficient incentives for DAO members to participate in governance or in the case of Tornado Cash, it becomes illegal to vote on proposals to upgrade the smart contract programming.

[4] The full facts of the scheme include facts that allow for the legal and tax entity characterisation of the DAO to be determined. If the DAO can be characterised, for UK tax purposes, as a resident (such as a trustee, or 'tax law partnership' or 'tax law company') or non-resident entity, then perhaps the tax treatment of a person's DeFi staking and lending activities is more straightforward. However, this will likely not be a static analysis given that the characterisation of a DAO as resident or non-resident could change as quickly as with a vote on one proposal.

[5] The collection of relevant facts, and application of facts to the tax law, is an exercise that is out of reach and administratively burdensome for individuals and tax practitioners that have individual client base. This is the basis for policy recommendation D below.

B. Framework of contract interactions is required

[6] As referred to in Annexure A, paragraphs [38] and [39], the UK HMRC should set out a framework to support analysis of the appropriate basis of taxation for DeFi lending arrangements.

[7] For example, Maker DAO is the DAO referable to the Maker protocol. Maker protocol is a public good that allows persons to 'deposit' collateral (in tokens) and receive loan proceeds (in tokens – DAI, a USD-pegged token collateralised). The Maker protocol is an example of an 'Account to Contract' arrangement, where economic ownership is retained by the taxpayer. The Aave protocol is an example of an 'Account to Contract to Account' arrangement, where it is the intention that economic ownership is retained but the token is risk-exposed by virtue of the other Account's use of the token.

[8] The tax exemption for securities lending was introduced to support market trading and behaviour that was thought to be helpful for price discovery. A similar exercise should be conducted to determine the 'price discovery' or other benefits to be gained in blockchain markets from a 'securities lending-like' tax exemption for 'Account to Contract to Account' and 'Account to Contract to Contract' arrangements.

C. A tax sandbox should be introduced to allow sufficiently globally decentralised DAOs to experiment with automating the calculation and collection of tax from person's that interact with a DeFi protocol

[9] It will become increasingly complex for individuals to understand their tax obligations when interacting with one or more DeFi protocols, as well as GameFi protocols and digital identity and data management protocols where persons can own their data and be remunerated for it.

[10] Other than the PAYG-W regime and Electronic Distribution Platform rules in Australia, an employer or platform operator, respectively, is not empowered to collect income tax or GST on behalf of an individual and remit it to the taxation office. Furthermore, the taxation office can only receive currency which inhibits the programmability of collecting and remitting the tax component on token activities directly to a taxation authority-controlled wallet.

D. Token issuers, whether they be DAOs or not, should be required to prepare a statement of general tax consequences of a person's interaction with the blockchain network or protocol

[11] Confusion about whether token activities are taxable is widespread, in large part because of the confusion about whether a token is a security or financial product. Since the majority of projects appear to take the position that the token is not a security or financial product, there is no disclosure document produced which would typically include a statement about the general tax implications of a person's acquisition and use of the token.

[12] As a result, a number of tokens have been issued with an array of different activities possible and tax authorities cannot physically keep up with the pace of innovation and range of potential tax treatments.

Annexure C Responses

1. **HMRC would like more information about the UK DeFi lending and staking sector. Please provide any information you hold that is relevant to the following questions. Where appropriate, please summarise data using appropriate ranges or categories, rather than providing only totals or minima and maxima.**
   a. **How many DeFi lending and staking platforms are you aware of that are based in the UK? What is the approximate value of their assets?**
   b. **Approximately how many UK-based individuals engage in DeFi lending and staking, and how much do they lend/stake?**
   c. **How many non-UK-based individuals are served by UK platforms and what amounts do they invest?**
   d. **How frequently do individuals transact, and what is the duration of each lending or staking transaction?**
   e. **Approximately what percentage of UK-based individuals engaging in DeFi are serviced wholly or mainly by UK platforms? Where else are the platforms UK individuals use commonly based?**

DeFi Pulse is a helpful beginning resource: https://www.defipulse.com. DeFi protocols can be sorted by category (Lending, DEXes, Asset Management, Yield Generator), and official links to the relevant protocol are usually available. From the protocol webpage you can access the governance documentation, which must be reviewed to determine the governance model and understand what other materials are required to collate the facts to determine whether the DAO is a UK tax resident or has a permanent establishment in the UK.

A chain analytics company such as Chainalysis or Elliptic could assist with blockchain data ingestion and further work to approximate geography of DeFi users to respond to (b) and (c).

In addition, a chain analytics company could prepare a model to respond to (d), which is relevant information to determine whether a securities lending or like exemption is appropriate.

2. **Bearing in mind that UK individuals are subject to the same tax treatment for DeFi lending and staking wherever the platforms they use are located, does the current tax treatment make the UK less attractive to platforms as a place to do business? If so, which jurisdictions are favoured and why?**

For the UK to attract entrepreneurs involved in building or contributing to DAO-governed platforms further work should be done to define minimum standards of legal recognition of the DAO and its platform, such as the requirement for security audits of smart contracts before deployed and dispute/complaint management processes. The entrepreneurs and core contributors typically receive the largest allocation of tokens, where any gain is presumed to be subject to tax upon disposal.

Any country that seeks to regulate DAOs, particularly if that regulation seeks to treat them as another class of company and subject to company tax, will likely not see DAO founders and contributors seek to reside in that country. For example, Wyoming's introduction of the DAO LLC has not attracted any of the top 20 DAOs to register there. In addition, a number of high corporate tax countries have not seen significant DAOs launch in their jurisdiction because the runway to build the protocol is significantly less after taking corporate tax into account.

Currently, the Caribbean countries are favoured because of the perception that they offer a 'regulatory haven' and 'tax haven'. However, several projects and their founders have not moved to those locations to warrant true economic substance prior to protocol launches or token distribution events. Such efforts may obfuscate regulators but will likely not be effective for legal and tax purposes in several cases.

3. Approximately what proportion of DeFi lending and staking transactions give rise to disposals for tax purposes under the current rules?

Possibly all of them if tokens are treated as 'cancelled' when lent or staked.

As stated previously in this submission, a framework should be introduced and data collated to determine the fiat currency value of activity and associated tax revenue based on various scenarios of tax treatments. That framework should distinguish between: 'Account to Contract', 'Account to Contract to Account' and 'Account to Contract to Contract' arrangements, where at least the first category should not give rise to a disposal or cancellation event for tax purposes.

4. Of the transactions giving rise to the disposals, what proportion would fall within the (i) Repo rules and (ii) Stock Lending rules, if cryptoassets were treated as securities?

Potentially all activities with governance tokens (i.e. at least a right to express sentiment and often a right to cast a vote) could arguably meet the definition of security for tax purposes but not regulatory purposes.

5. Do you favour changes to the current rules?

Yes, this submission provisionally supports changes to the current rules being set out in separate rules (Option 2) which 'switch off' existing tax rules where tax policy warrants the incentive/concessional treatment and/or where certain conditions are met which would be defined once the data is available from a chain analytics company.

6. Do you consider Option 1 to be a suitable model for DeFi lending and staking transactions? What are the pros and cons? If appropriate, should the Repo, the Stock Lending or both regimes be expanded to apply to DeFi transactions?

Option 1 is unlikely to be suitable because most DeFi lending and staking arrangements entered into by everyday taxpayers are not short term or exited within one or two days which is the premise of the Repo and Stock Lending regimes.

Once the average length of DeFi lending and staking arrangements is understood from the data analysis, appropriate tax policy can be determined to incentivise longer or shorter behaviour with DeFi lending and staking transactions. Tax policy could be a more useful reflex than regulatory reform to protect consumers from allocating capital unwisely to high-risk protocols offering token incentives.

7. Do you consider Option 2 to be a suitable option? What are its pros and cons? Should the new rules be modelled on the Repo rules or the Stock Lending rules, or would both sets of rules be needed to cater for different contractual arrangements?

This submission provisionally supports Option 2 subject to what the data shows and the policy outcomes desired that can be impacted through tax policy.

Relevant data to inform tax policy will include average capital used (in fiat currency terms) in DeFi lending and staking, average days that the lending or staking arrangement is on foot, and an approximation of tax payable or tax losses incurred when a person exits the lending or staking arrangement per reasonable tax treatment scenario.

To the extent the tax policy should incentivise innovation and investment in such early stage innovation, separate rules could also introduce the conditions applicable to the tax concessionary treatment. For example, token rewards not assessable income if the DAO meets the minimum standards of legal recognition set down by the UK parliament (as advised by the UK Law Commission and UK HMRC).

8. Do you consider Option 3 to be a suitable option? What are its pros and cons?

Yes, to the extent that it can encourage innovation an investment in early stage ventures.

9. Are there alternative approaches to the taxation of DeFi lending and staking that have been adopted by other jurisdictions that the government could consider? If so, please provide more details and reasons.

Japan has recently proposed easing company taxation from issuing of tokens and introducing tax breaks for individuals investing in tokens to strengthen its economy.

10. Besides the options outlined above, are there any further options for change that the government could consider?

Introduction of a tax sandbox would allow and attract DAOs to experiment in a safe environment how to best support its users to comply with the UK tax regime. Further detail is set out above in this submission.

11. How could the government be confident that any proposed rules would not discriminate in favour of users of DeFi services?

The law is already not technology neutral. Centralised technology providers have certainty of legal status and applicable regulations, DAOs offering DeFi services do not. If decentralisation is a policy goal worth protecting to encourage blockchain-based innovation that puts the consumer first and, in a position, to control their own data, then new rules could operate to put DAOs on more of a level playing field with centralised technology providers at least insofar as providing the market with certainty about the legal and tax implications of being able to choose between web2 and web3 services.