

Charities Earning Staking Revenue



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Cryptocurrencies, along with other cryptoassets, are becoming increasingly important. One aspect of them is the acquisition of reward coins. In the final section of this article (“Charity rewards and their taxation”) the authors look at the difficult question of the proper measure of taxable income represented by these reward coins as staking revenue from proof-of-stake cryptocurrencies in the hands of universities and other charities in the UK. First, however, they set the scene by setting those questions in their context and exploring more fundamental issues about cryptocurrency generally and the economic reality of reward coins as staking revenue in particular. The inflationary aspect of the receipt of reward coins is not accounted for in the rules on the measure of income currently applied by HMRC (or indeed those applied by the IRS).

Cryptocurrency belonging to a charity

Convincing evidence that cryptocurrencies have entered the mainstream lies in RNLI’s website advertisement that it is willing to accept donations of Bitcoin.¹ Moreover, Lucy Cavendish College announced that it received a donation of Bitcoin on 8 March 2022, the first Cambridge College to do so.² In the US, charities’ acceptance of cryptocurrency donations is widespread. For example, the US unit of the international charity Save the Children lists approximately 60 cryptocurrencies that it will accept as donations.³ Outside the charity context, Sotheby’s was willing to conduct live bidding in both dollars and Ether for an auction of Banksy’s work in New York on 17 November 2021 and to settle the hammer price in one of three cryptocurrencies, although it insisted on fiat when taking payment of buyer’s premium.⁴

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¹ “Donate Bitcoin”, *rnli.org*, <https://rnli.org/support-us/give-money/bitcoin-donations> [Accessed 5 June 2022].

² “Lucy Cavendish becomes the first Cambridge College to receive a cryptocurrency donation” (10 March 2022), *cam.ac.uk*, <https://www.lucy.cam.ac.uk/news/lucy-cavendish-becomes-first-cambridge-college-receive-cryptocurrency-donation> [Accessed 5 June 2022].

³ “Why Donate Bitcoin, Ethereum, NFTs and other Cryptocurrencies to Charity”, *savethechildren.org*, <https://www.savethechildren.org/us/ways-to-help/ways-to-give/ways-to-help/cryptocurrency-donation> [Accessed 5 June 2022].

⁴ K. Jhala, “Crypto wallets at the ready: Sotheby’s to accept live bidding in Ethereum on two Banksy works” (11 November 2021), *theartsnewspaper.com*, <https://www.theartsnewspaper.com/2021/11/11/sothebys-to-accept-live-bidding-in-ethereum-on-two-banksy-works> [Accessed 5 June 2022].

RNLI and academic institutions (with charitable status) must sense interest among donors to make such gifts despite their not being entitled to Gift Aid. Gift Aid is reserved for gifts of money, whereas cryptocurrency is not considered by HMRC to be currency or money.⁵

Cryptocurrency as property

For some purposes, however, cryptocurrency *is* treated as property. The UK Jurisdiction Taskforce’s “Legal Statement on Cryptoassets and Smart Contracts” (11 November 2019) considers the legal status of cryptoassets as property and, while having no binding effect, has been considered and followed by the English courts.⁶ The Commercial Court decided that cryptocurrency (Bitcoin) is a form of property for purposes of obtaining a proprietary injunction. It therefore follows in the tax context that a donor of cryptocurrency will be able to claim relief from capital gains tax on any inherent gain in its currency donation to charity under s.257 of the Taxation of Chargeable Gains Act (TCGA) 1992, which applies to the disposal of an asset; the transfer would be on a no gain/no loss basis. On the other hand, the donor will *not* obtain income tax loss relief under s.431 of the Income Tax Act (ITA) 2007, as that relief applies only to gifts of shares, securities and real property. Section 23 of the Inheritance Tax Act (IHTA) 1984 provides that a transfer of value is exempt from inheritance tax to the extent that the value attributable to property is given to a charity, so a gift of cryptocurrency will be free from inheritance tax. Finally, whereas gifts and donations to a charity will form part of its income for the purposes of charity law, they are not “income” of the charity for tax purposes.

Assuming that RNLI will not convert all such gifts immediately to sterling⁷ and will hold some Bitcoin as an investment, RNLI’s trustees will have concluded that, despite Bitcoin’s volatility and susceptibility to being stolen by hackers, as a matter of charity law they are justified in holding this asset as part of a properly diversified portfolio. In other words, the trustees will not have breached their trust by venturing on a “hazardous speculation” in holding Bitcoin, given the contribution of other items in the portfolio to its overall risk profile.⁸ Or RNLI’s trustees might have relied on a specific authorisation to hold cryptocurrency in the organisational documents. They will also have concluded that receiving Bitcoin donations, even anonymously, does not violate their obligations under anti-money laundering rules.⁹

Charities owning cryptocurrency will typically need to earn some return from their holdings, or at least to consider doing so. This may include obtaining staking revenue (a share of newly minted reward coins issued to incentivise specialist providers of computer services necessary to maintain the blockchain) and they will need to consider the taxation of such revenue. That is indeed the subject addressed by the final section of this article. Before then, however, we explain the mechanics of blockchains and the nature of new coins which are generated from them, and this will include a distinction between two particular types of platforms.

⁵ Compare two HMRC texts: HM Revenue and Customs, *Charities: Detailed Guidance Notes on How the Tax System Operates* (London: The Stationery Office, 2013), Ch.3 “Gift Aid” para.3.2.1: “A donation qualifies for Gift Aid if it’s a gift consisting of a ‘payment of a sum of money’ by an individual”; and HM Revenue and Customs, *HMRC Cryptoassets Manual* (London: The Stationery Office, 2021), “CRYPTO10100—‘Introduction to Cryptoassets: what are Cryptoassets?’” (“also referred to as ‘tokens’ or ‘cryptocurrency’) are cryptographically secured digital representations of value or contractual rights ... HMRC does not consider cryptoassets to be currency or money.”)

⁶ *AA v Persons Unknown* [2019] EWHC 3556 (Comm); [2020] 4 W.L.R. 35; [2020] 1 C.L.C. 64; (2020) 24 I.T.E.L.R. 513.

⁷ The conversion fee for doing so has been reported to be generally in the range of 2.5 per cent. Jemima Kelly, “Cryptocurrencies will be as useless in the metaverse as they are now”, *Financial Times*, 27 October 2021, p.34.

⁸ See *Bartlett v Barclays Bank Trust Co Ltd* [1980] 1 Ch. 515, 532; Lord Nicholls, “Trustees and Their Broader Community: Where Duty, Morality and Ethics Converge” (1995) 9 Tru.L.I. 71.

⁹ The RNLI website “Donate Bitcoin”, [rnli.org, https://rnli.org/support-us/give-money/bitcoin-donations](https://rnli.org/support-us/give-money/bitcoin-donations) [Accessed 5 June 2022] states: “We already have safeguards in place to monitor donations, however we receive them. In addition, we will notify the Charity Commission should an individual anonymous donation exceed a certain amount.”

The mechanics of cryptocurrencies

The nature of a blockchain

A blockchain is an electronic ledger of agreed transactions, redundant duplicates of which are run on many unrelated computers, pursuant to “distributed ledger technology”. All the blockchains discussed in this article are open to any member of the public who wishes to record transactions on them. Transactions can involve the issuance and transfer of cryptocurrencies, of which one will be “native” to each blockchain. Participants who wish to transact on a platform propose transactions that are periodically batched together and sent to a person (a “validator”) which has been chosen to maintain a copy of the ledger on its computer at all times and to authorise transactions if compliant with the blockchain’s rules. The validator may prioritise those transactions to which proposers of transactions have voluntarily appended a fee to make them more attractive for including. If the chosen validator approves the batch of proposed transactions as being consistent with the protocol’s rules (e.g. no coins have been spent more than once), and such approval is not contested by any other potential validator, they are appended to the end of the chain in a “block”. It is extremely difficult later to revise transactions that have been recorded in the ledger, which is intended to be immutable.

Some blockchains (such as Bitcoin) are intended to replicate electronic cash and simply record transactions (payments, remittances) in their native cryptocurrency. Others (Ethereum, Cardano) also host user applications such as contracts between participants whose terms are defined and/or performed by computer code (“smart contracts”).¹⁰

Given the lack of a central authority in public blockchains to authorise participants or transactions, a key requirement for them is to implement a rule for deciding which transactions proposed to be added to the chain during a given period of time (a “slot”) are acceptable under the network’s rules. With a large number of coin-holders (and so potential validators), it is essential to establish an algorithmic protocol (i.e., one that does not rely or depend on the exercise of a central authority’s discretion) for choosing one who can be trusted to promote the network’s best interests. At its outset, a blockchain’s protocol is no more than a set of rules describing a “consensus mechanism” to achieve this goal; and the perceived ability of those rules to avoid the risk of a bad actor becoming the validator and approving transactions that benefit only itself is a major component of the blockchain’s ability to attract participants to enter transactions on its ledger, and hence of its utility and value.

Earning from a blockchain

The best incentive for validators to maintain the network (by constantly running their computers and validating transactions) is to grant them new native coins (“reward coins”),¹¹ as it gives an additional reason for behaving in the network’s interests. Coins usually have an upper limit on their possible number to maintain scarcity value. For example, it is reported that there is a cap of 45 billion of ADA coins,¹² with at least 34.3 billion having been issued.¹³ Cardano (the proof-of-stake blockchain for ADA) anticipates that fewer reward coins will be minted over time as the number of transactions (and so transaction fees

¹⁰ See also J. Tampi, “Non-Fungible Tokens for Trustees” [2021] P.C.B. 205; L. Rapeport, “Digging for Gold: The Situs of Cryptoassets” [2021] P.C.B. 183.

¹¹ It is a simplification to speak of the blockchain issuing reward coins to validators; actually, the validator entitled to a reward is permitted to violate the general prohibition against sending itself coins that it has not previously received from another participant so as to create the reward.

¹² ADA is the cryptocurrency native to Cardano, a public blockchain platform. Cardano is open-source and decentralised, with consensus achieved using the proof-of-stake system described below. We refer to Cardano (ADA), as one of the most prominent, in illustrating our explanation of proof-of-stake blockchains.

¹³ See “Cardano”, *coinmarket.cap*, <https://coinmarketcap.com/currencies/cardano/project-info> [Accessed 5 June 2022].

for validators) on the blockchain increase, and as the upper limit on the number of ADA in circulation approaches.¹⁴

Earning from holding cryptocurrency, as described below, depends on whether “proof-of-work” or “proof-of-stake” is the means for achieving consensus with respect to the platform’s transactions. But in both systems issuing reward coins, without providing for destroying other coins automatically, has an inflationary impact on the value of outstanding coins (i.e., they will decline in value) because the current value of the network is now shared out among a larger number of coins. This economic fact, which is critical for tax policy, has been forcefully emphasised in a series of articles by one of the leading US law professors working in this field, Abraham Sutherland.¹⁵ As Professor Sutherland has explained:

“Increasing the token supply means that new tokens dilute the value of all tokens. Each new token reduces the stake in the network represented by each existing token, and in turn each existing token loses value because it represents a smaller fraction of *total network value*”.¹⁶

Proof-of-work

In proof-of-work blockchains,¹⁷ validators are chosen based on the brute amount of computing power that they can bring to bear in service of the chain.¹⁸ Such validators, called “miners”, do not need to own any coins to be chosen and have no reason to share their reward coins with any other holders. Limiting the pool of validators to specialists with enormous computers harnessed to solving extremely complicated algorithmic puzzles almost instantaneously, however, is considered sufficient protection against bad actors being chosen.

Proof-of-stake

Proof-of-stake blockchains,¹⁹ however, choose validators algorithmically on the basis of their stake in the enterprise, which they prove by surrendering control over a minimum number of native coins.²⁰ Coins “pledged” by validators in some protocols may be removed (“slashed”) if the validators engage in bad behaviour, such as: seeking to validate a transaction that does not comply with the blockchain’s rules; validating more than one block at the same level of the chain; or not making available constantly one’s computing power.²¹ Choosing validators in proof-of-stake blockchains does not require the massive

¹⁴“This system is designed to ensure that the portion of rewards taken from the reserves is high at the beginning, when transaction numbers are still relatively low. This incentivizes early adopters to move quickly to benefit from high initial rewards. Over time, and as the number of transactions increases, additional fees will compensate for smaller reserves.” See “Cardano monetary policy”, [cardano.org, https://docs.cardano.org/explore-cardano/monetary-policy](https://docs.cardano.org/explore-cardano/monetary-policy) [Accessed 5 June 2022].

¹⁵ See, e.g., M. Landoni and A. Sutherland, “Dilution and True Economic Gain from Cryptocurrency Block Rewards” [2020] *Tax Notes Federal* 1213; A. Sutherland, “Cryptocurrency Economics and the Taxation of Block Rewards” [2019] *Tax Notes Federal* 749; A. Sutherland, “Cryptocurrency Economics and the Taxation of Block Rewards Part 2” [2019] *Tax Notes Federal* 953.

¹⁶ A. Sutherland, “Cryptocurrency Economics and the Taxation of Block Rewards” [2019] *Tax Notes Federal* 749, 760 (emphasis added).

¹⁷ Bitcoin and, currently, Ethereum are the most prominent.

¹⁸ On 30 April 2021 it was estimated that the annual electricity consumption required to maintain the Bitcoin network exceeded that of Norway. See M. Lu, “Visualizing the Power Consumption of Bitcoin Mining” (20 April 2021), [visualcapitalist.com, https://www.visualcapitalist.com/visualizing-the-power-consumption-of-bitcoin-mining](https://www.visualcapitalist.com/visualizing-the-power-consumption-of-bitcoin-mining) [Accessed 5 June 2021].

¹⁹ Prominent proof-of-stake blockchains, with their native coins in parenthesis, include: Cardano (ADA); Solana (SOL); Algorand (ALGO); Tezos (XTZ); Polkadot (DOT); Avalanche (AVAX); and Polygon (MATIC) and Near (NEAR). Also, the Ethereum blockchain, which is the most popular facility for smart contracts, is expected to complete its transition to a proof-of-stake consensus mechanism later this year. J. Schwartz, “The Taxation of Decentralised Finance” [2022] *Tax Notes Federal* 767, 781.

²⁰ J. Schwartz, “The Taxation of Decentralised Finance” [2022] *Tax Notes Federal* 767, 781, discussing the future proof-of-stake version of Ethereum: “Under proof of stake, the protocol adds each new block of data to its chain by algorithmically choosing a node [validator] to broadcast its block to the other nodes for verification. A node’s likelihood of being chosen by the protocol increases based on the amount of ETH it has staked in a designated smart contract. Nodes earn rewards, primarily in the form of inflationary ETH, when their blocks are verified, and they can have their stakes burned (called slashing) if they create invalid transactions or engage in other malicious behaviour.” [Footnote omitted.]

²¹ “Proof of stake depends on the proposition that nodes with a lot of ETH to lose are less likely to take actions that would undermine the Ethereum blockchain’s integrity or subject them to slashing risk.” Schwartz, “The Taxation of Decentralised Finance” [2022] *Tax Notes Federal* 767, 781.

computer power used to solve the algorithmic puzzles of proof-of-work blockchains; thus, proof-of-stake is favourable in the eyes of environmentally conscious users.²²

Validation in a proof-of-stake blockchain is open to any coin-holder with modest computing skills, which creates the risk that a well-financed bad actor could acquire 50 per cent or more of the outstanding coins and repeatedly validate transactions that benefit only itself. In order to avoid this risk, proof-of-stake blockchains are designed to encourage: (i) many coin-holders to be part of the validation process, even without providing computing services; and (ii) a healthy number of validators to avoid collusion. As to the first point, holders of proof-of-stake coins who do not wish to provide computing services can commit, or “delegate”, their coins to validators to substantiate the latter’s commitment to the network and so increase their chance of being chosen.²³ As to the second point, an upper limit on the number of reward coins for each validation is usually established to avoid market forces reducing the number of validators to a handful. Beyond a certain level, the amount of delegated coins amassed by a validator does not lead to increased rewards.²⁴

The position of a charity

A charity or university (with charitable status) holding proof-of-work coins (e.g. Bitcoin) will need to take pains in order to earn periodic income from its holding, given that miners have no need of coins in order to be chosen to validate the next block (they are chosen if they solve the puzzle most quickly). For example, the charity could transfer control of its Bitcoin to an intermediary, a decentralised finance lending platform, which would deal with a borrower needing those or similar coins, in exchange for a return.²⁵ This transaction may not always be easily achieved, because the principal demand of borrowers appears to be for stablecoins.²⁶

But a charity’s desire for income is easily satisfied if it owns proof-of-stake coins because the consensus mechanism encourages passive owners to “delegate” their coins to validators in exchange for a share of reward coins. This “staking revenue” is attracting the interest of some charities and universities as a novel item of investment income and, having decided to earn it, trustees will consider whether it is entitled to any of the exemptions from UK income or corporation tax applicable to charities.

In pursuit of an accepted terminology, “staking” and “delegating” have the same meaning when referring to proof-of-stake blockchains and HMRC favours the term “staking”.²⁷ But HMRC also uses the term “staking” to refer to a different transaction, the transfer of coins to a lending platform:

“A person (“liquidity provider”) transfers the control of tokens to a DeFi lending platform. This type of transaction may be termed ‘staking’ or ‘providing liquidity’.”²⁸

²² In both systems, the expertise and computer power required to validate a transaction are modest, but the process of *identifying the next validator* in proof-of-work is extremely costly.

²³ When coin-holders delegate their coins to validators, they suffer some restriction on their ability to trade them and then receive a share of reward coins after some delay.

²⁴ See “Ouroboros Protocol”, *cardano-foundation.gitbook.io*, <https://cardano-foundation.gitbook.io/stake-pool-course/lessons/introduction/ouroboros> [Accessed 5 June 2022].

²⁵ This is described in recent guidance set out in HM Revenue and Customs, *Cryptoassets Manual* (London: The Stationery Office, 2021). “CRYPTO61130—Decentralised Finance: Lending and Staking: Making a DeFi Loan”. This article does not address the taxation of charities’ receipt of returns from DeFi Loans.

²⁶ E. Szalay, “Crypto’s Evolution Adds New Risks to Potential Rewards” (7 May 2022), *Financial Times — FT Money*, p.6 (“One particular currency fuels a lot of credit-linked business — stablecoins, digital tokens that enthusiasts claim bridge the gap between crypto and the fiat currency world, as they are designed to be backed by US dollars or other non-crypto financial assets ... The crypto world is short of dollars because few participants have access to traditional banks. Stablecoins, the closest equivalent of hard currency, oil the movement of money in crypto, with investors using stablecoins to hop from one exchange to another. As they are much in demand, investors are often ready to pay higher rates of interest to borrow them than other cryptocurrencies.”).

²⁷ HM Revenue and Customs, *Cryptoassets Manual* (2021), “CRYPTO21200 — Cryptoassets for Individuals: Income Tax: Staking” (“Some types of consensus require the ‘staking’ of exchange tokens which weights the entitlement to newly forged tokens ...”).

²⁸ HM Revenue and Customs, *Cryptoassets Manual* (2021), “CRYPTO61120 — Decentralised Finance: Lending and Staking: Meaning of ‘loan’ and ‘staking’”.

This common use of “staking” is unfortunate because the UK tax analysis of the two transactions often differs. The activity of lending coins to an intermediary (or directly to a peer borrower) often entails a transfer of beneficial ownership for tax purposes (i.e., a disposal),²⁹ whereas delegating coin to a validator of a proof-of-stake blockchain never does.³⁰ This article uses the term “staking” to refer solely to delegating proof-of-stake coins to a validator.

How would a charity delegate its ADA?

Delegating ADA is simple; a coin-holder chooses a validator, or a pool of numerous delegators run by a validator, from a website (listing hundreds) that identifies the fees to be charged by the validator (either a fixed number of ADA or a percentage of the reward coins, or both), with links to historic data about its rate of success in being chosen and the return it has obtained on delegated coins.³¹ The coin-holder then simply identifies the number of its coins it wishes to delegate to the chosen validator and pays a small initial charge to start delegating,³² or if it holds its coins on an exchange it instructs the exchange to implement the delegation (at the cost of fees withheld by the exchange). No transfer of legal or beneficial ownership occurs and a delegator of ADA will receive its share of reward coins, net of coins retained by the validator, directly from the network after at least 15 days.³³

A delegator of ADA is free to trade its delegated coins at all times *other than* the moment every five days when the Cardano blockchain takes a snapshot of all delegations of ADA in wallets³⁴ (or, when one “epoch” of 432,000 slots ends and the next five-day period begins). And, unlike some proof-of-stake networks, a delegator of ADA runs no risk of losing its delegated coins: Cardano’s design to encourage wide participation in validation appears to have been so effective that it is said that no ADA of either validators or delegators has been slashed.³⁵

The dilutive effect of issuing reward coins in proof-of-stake mechanisms

Returning to the dilutive effect of reward coins, when a validator receives reward coins for validating a transaction, two consequences occur.

- First, the newly issued coins have a dilutive effect on the value of all outstanding coins, because the current value of the network must be shared out among a larger number of units. Indeed, if reward coins are issued throughout the year—for example, at the end of every five-day epoch on Cardano—a reward coin issued early in the year will suffer a reduction in value as a result of the issuance of additional reward coins later in the year.³⁶

²⁹ See HM Revenue and Customs, *Cryptoassets Manual* (2021), “CRYPTO61620 — Decentralised Finance: Lending and Staking: Chargeable Gains: Making a DeFi Loan”; HM Revenue and Customs, *Cryptoassets Manual* (2021), “CRYPTO22100 — Cryptoassets for Individuals: Capital Gains Tax: What is a Disposal?”.

³⁰ See HM Revenue and Customs, *Cryptoassets Manual* (2021), “CRYPTO21200 — Cryptoassets for Individuals: Income Tax: Staking”.

³¹ See <https://adapools.org/delegations> [Accessed 7 June 2022].

³² E. Hill, “Staking a delegating for beginners. A step-by-step guide” (17 July 2020), *cardano.org*, <https://forum.cardano.org/t/staking-and-delegating-for-beginners-a-step-by-step-guide/36681> [Accessed 7 June 2022]. The illustrative examples in this article do not account for this delegation charge or, reward coins retained by the validator.

³³ See “How to get started with Cardano staking for newbies”, *adapools.org*, <https://static.adapools.org/docs/newbie-ultimate-guide.pdf> [Accessed 7 June 2022].

³⁴ “How to get started with Cardano staking for newbies”, *adapools.org*, <https://static.adapools.org/docs/newbie-ultimate-guide.pdf> [Accessed 7 June 2022].

³⁵ See “Why Cardano does not need slashing” (3 April 2021), *cardanians.io*, <https://cardanians.io/en/why-cardano-does-not-need-slashing-152> [Accessed 7 June 2021].

³⁶ To give a sense of the approximate number of new reward coins that are minted in an established proof-of-stake network, in 2019 the number of XTZ coin on the Tezos network increased by 5.06 per cent. A holder of XTZ that did not delegate them to a validator would have suffered a dilution in the value of its XTZ of 4.82 per cent, assuming a constant value for the network throughout the year. See Landoni and Sutherland, “Dilution and True Economic Gain from Cryptocurrency Block Rewards” [2020] *Tax Notes Federal* 1215 fn.8.

- Second, the validator's (including its delegators') relative share of the network increases, while that of all non-delegating coin-holders decreases.³⁷ Non-delegators' aggregate losses equal the aggregate gains of validators and their delegators.

These consequences, which are discussed only in general terms in this article, are illustrated in detail in Sutherland's leading article in the US context:

"It is true that newly minted tokens have economic value, and we can further assume that they also have a reasonably determinable [full market value] at any given time. The problem is that block rewards [reward coins] convey value to validators through the combined effects of dilution and redistribution. Increasing the token supply means that new tokens dilute the value of all tokens. Each new token reduces the stake in the network represented by each existing token, and in turn each existing token loses value because it represents a smaller fraction of total network value, defined as the value of a token multiplied by the total number of tokens. Counting the new tokens as taxable gross income can overstate the recipient's new wealth if it ignores the new tokens' dilution effect on all tokens. Moreover, block rewards are a zero-sum game, in the sense that the receipt of new tokens increases validators' wealth only insofar as it redistributes network value away from non-validators."³⁸

The first consequence (dilutive effect) occurs irrespective of positive or negative changes in the value of the network caused by other factors (e.g., developments in the broader economy),³⁹ and for illustrative purposes the cases discussed in this article assume that there are no impacts on the value of the network from these other factors throughout the year. The first consequence is an important factor in designing the proper taxation of reward coins,⁴⁰ whereas the second is an important element in understanding coin-holders' incentives to delegate.

The dilution rate suffered by a coin-holder who does not win a share of reward coins is derived from the reciprocal of the rate of increase of tokens in circulation issued as rewards.⁴¹ For example, if reward coins are issued to validators throughout a year at a rate of 10 per cent of the coins outstanding at the beginning of the year, the annual rate of dilution in the relative share in the network of a non-delegator's existing coins is 9.09 per cent.⁴² Accordingly, to avoid having its proportionate share in a proof-of-stake network reduced, a rational coin-holder will wish to participate in the rewards and delegate its coins to a validator. Most holders of ADA do this: according to a post on a Cardano website dated 3 April 2021, approximately 71 per cent of the 23 billion ADA coins then in circulation had been staked for a share of rewards in validation.⁴³

But every delegator also will suffer some dilution to its existing coins, which will almost invariably be outpaced by the amount of the delegator's increased share in the network, depending on the proportion of other coin-holders who participate in delegation. For example, if a charity is the sole delegator of ADA to all validators in one year and earns all of the reward coins,⁴⁴ although each of its outstanding coins has a reduced value at the end of the year (assuming that the value of the network stays constant), it is intuitive to conclude that the value of the charity's increased share in the network vastly outweighs the decline in

³⁷ In other words, a coin-holder who does not receive any reward coins is continually suffering a reduction in its relative share in the coin's network.

³⁸ Sutherland, "Cryptocurrency Economics and the Taxation of Block Rewards" [2019] *Tax Notes Federal* 749, 760.

³⁹ Sutherland, "Cryptocurrency Economics and the Taxation of Block Rewards" [2019] *Tax Notes Federal* 749, 763.

⁴⁰ The effect of dilution on the proper measure of taxable income in the UK context has been noted briefly in R. Sultman and L. Mullarkey, "Cryptoassets: Examining HMRC's Manual" [2021] *Tax Journal* 12, 13 ("Furthermore, despite the inclusion [in HMRC Cryptoassets Manual] of the new content on proof of stake networks, there is no mention of the fact that such networks are by nature inflationary (due to the regular issuances of tokens as staking rewards as well as validator rewards), and whether/how that should be considered when ascertaining value.").

⁴¹ See Landoni and Sutherland, "Dilution and True Economic Gain from Cryptocurrency Block Rewards" [2020] *Tax Notes Federal* 1215.

⁴² $(1 - (1/1.1)) = 9.09\%$. See Sutherland, "Cryptocurrency Economics and the Taxation of Block Rewards" [2019] *Tax Notes Federal* 749, 764.

⁴³ See "Why Cardano does not need slashing" (3 April 2021), *cardanians.io*, <https://cardanians.io/en/why-cardano-does-not-need-slashing-152> [Accessed 7 June 2021].

⁴⁴ We assume for purposes of illustration that the validators do not retain any reward coins as their fee.

value of its holding; the entire reward is earned by the sole delegator, whereas the inflationary effect is shared amongst all coin-holders.

In contrast, in the unlikely scenario that the charity and *all other coin-holders* delegate their coins to validators, there will be no change in the relative value of each coin-holder's share of the network arising from the issuance and, whereas each outstanding coin has a reduced value, in aggregate no coin-holder suffers any change in its economic wealth relative to any other coin-holder. In that scenario, treating a coin-holder's receipt of reward coins as taxable income in the amount of the value of the reward coins on the date of receipt ignores the fact that the coin-holder has become no wealthier as a result of the receipt; instead, the amount of taxable income should be nil.⁴⁵ The effect is similar to a company's issuance of new shares in the same proportion to all shareholders in a pro rata share distribution, which is not considered an item of UK taxable income.⁴⁶

Charity rewards and their taxation

Relevance of dilution to taxation

The last example at the end of the previous paragraph illustrates an important point for tax policy. The amount of economic income that results from a delegator's earning reward coins comprises the delegator's *net increase* in its share of the network's value, taking into account the decline in value of all coins in issuance caused by inflationary rewards. If, instead, the tax system considers the proper measure of taxable income to be the fair market value of the reward coins on the day of receipt (which the UK and the US have done, as explained further below), this will overstate taxable income as compared with economic income because it ignores the dilutive effect on the charity's outstanding coins.⁴⁷ For example, an issuance of reward coins to delegating coin-holders at a participation rate of 100 per cent should not be taxed; no delegator has increased its economic wealth.

The reported actual ADA staking participation rate of approximately 71 per cent, resulting from incentives, is in the expected range; the delegation rate needs to be higher than 50 per cent (to avoid a majority of coins being held by a single bad actor) and is likely to be lower than 100 per cent (because some holders will not bother to delegate). The extreme cases of sole delegation and 100 per cent participation in delegation are set out above to illustrate the fact that the value of every outstanding coin will be diluted by the issuance of reward coin. A coin-holder can only mitigate, but never escape, dilution by delegating its coins, and a definition of taxable income that ignores the effect of dilution on the delegator, in light of the overall participation rate in delegation by all coin-holders, will overstate the delegator's economic income.

In both of the extreme cases, however, self-help should be available to the delegating coin-holder.⁴⁸ That is, at the end of the taxable year in which a coin-holder receives reward coins, it could sell all its

⁴⁵ See Sutherland, "Cryptocurrency Economics and the Taxation of Block Rewards" [2019] *Tax Notes Federal* 749, 762–763, illustrating the complete over-inclusion in taxable income if reward coins are included at their value on the day of receipt in the scenario of 100 per cent participation in delegation (which he calls the "Standard Oil Coin" case). Sutherland also illustrates a case of lesser over-inclusion when the rate of participating in delegation is 50 per cent (which he calls the "Hardship Coin" case). Sutherland, "Cryptocurrency Economics and the Taxation of Block Rewards" [2019] *Tax Notes Federal* 749, 764–766. Professor Sutherland creates an equation to model the redistribution effect from non-delegators to validators, referring to "V", the validation participation rate, at p.766.

⁴⁶ If shares are allotted to shareholders in proportion to their existing shareholdings, the reorganisation provisions in TCGA 1992 ss.126–130 apply so that when the allotment of shares does not materially affect the overall economic ownership of the company, no disposal is considered to occur; rather the existing shares and the new shares are treated as the same asset. This is the result also under the federal tax law of the US. See *Eisner v Macomber* [1920] 252 U.S. 189 at [203].

⁴⁷ J. Schwartz, "The Taxation of Decentralised Finance" [2022] *Tax Notes Federal* 767, 782: "Taxing an illiquid staker's inflationary rewards on receipt results in overtaxation by ignoring the dilutive effect new tokens have on the value of outstanding tokens."

⁴⁸ See Sutherland, "Cryptocurrency Economics and the Taxation of Block Rewards" [2019] *Tax Notes Federal* 749, 765–766: "New tokens are gross income today, while any losses because of dilution are unrealized until tokens are liquidated. In principle, higher taxable income this year might be offset eventually, when tokens are ultimately liquidated. Moreover, in principle, this asymmetry could be avoided by liquidating cryptocurrency holdings to realize losses as well as gains, and then repurchasing the entire stake, establishing a new basis in the token holdings."

coins for a reduced per-coin amount reflecting the dilution, and repurchase those coins at that reduced cost, thereby realising a loss⁴⁹ that should offset some (or in the case of a hypothetical 100 per cent delegation participation rate, all) of the taxable income on the receipt of the reward coins, while maintaining its relative share in the network. But this technique entails transaction costs; may be defeated by restrictions on relief for losses in the tax law; and may not be known by every affected coin-holder.

It should be noted that some commentators have not fully agreed with Professor Sutherland's conclusion that the issuance of reward coins dilutes the value of all coins. The Tax Section of the New York State Bar Association has pointed out that his conclusion depends on "the assumption that the aggregate value of all units of a particular cryptocurrency is static at any given point in time, such that issuing more units dilutes the value of the existing units."⁵⁰ So, per this assumption, there is no economic accession to wealth "to the extent the value of the staking rewards is offset by a decrease in value of the aggregate cryptocurrency held by the recipient."⁵¹ The Tax Section has agreed that this view has most force when the rate of participation by all coin-holders in delegating coins to validators is high—as it is in the case of ADA—but has questioned the extent of dilution in other cases.⁵² Going beyond this, Professor Ordower considers it unlikely that any dilution whatsoever occurs because the reward coins simply reflect the value which the validation services for which they are minted have added to the network, analogising to equity compensation (which apparently "generally does not affect the value of outstanding shares"):

"[T]he carefully controlled growth in outstanding tokens through network maintenance block rewards suggests that block rewards are at least matched by value added through the performance of network maintenance services."⁵³

Whatever the extent of economic dilution caused by issuing reward coins for validating transactions in proof-of-stake protocols in a particular case, charities and universities should explore their entitlement to apply the various tax exemptions available to them to shelter an income inclusion in the amount of the fair market value of their reward coins, which, as discussed below, is the proper measure of income according to HMRC.

How many charities and universities own proof-of-stake currencies?

Before turning to UK tax in detail, it is worth considering the extent to which UK charities or universities currently hold proof-of-stake coins in their investment portfolios. Donations of Bitcoin and Ethereum to charities have been reported, but we have found no reported donations of proof-of-stake coins.⁵⁴

But donations are not the only means whereby a charity may obtain cryptocurrency. Some UK universities are involved in researching proof-of-stake blockchain technology and are very likely to hold native coins for experimentation or portfolio investment.⁵⁵

Also, many venture capital funds, favoured by some endowed charities, invest in digital assets and are authorised to distribute returns in kind (in the form of cryptocurrencies) to their investors; so, it is likely that at least a few charitable limited partners would have opened wallets and received proof-of-stake coins in that way. Indeed, absent an in-kind distribution, the tax question addressed by this article would arise

⁴⁹ Again, this follows our assumption that the overall value of the network does not vary during the year for reasons other than the issuance of reward coins. In years when the particular coin's value is increasing, this technique may reduce the amount of gain recognised, rather than lead to a net loss.

⁵⁰ New York State Bar Association (Tax Section), *Report on Cryptocurrency and Other Fungible Digital Assets* (2022), pp.45–46.

⁵¹ New York State Bar Association (Tax Section), *Report on Cryptocurrency and Other Fungible Digital Assets* (2022), pp.48.

⁵² New York State Bar Association (Tax Section), *Report on Cryptocurrency and Other Fungible Digital Assets* (2022).

⁵³ H. Ordower, "Block Rewards, Carried Interests, and Other Valuation Quandaries" [2022] *Tax Notes Federal* 1551, 1562.

⁵⁴ See generally "UK charity trustees warned on crypto-asset gifts from anonymous donors" (19 May 2022), *step.org*, <https://www.step.org/industry-news/uk-charity-trustees-warned-crypto-asset-gifts-anonymous-donors> [Accessed 7 June 2022]; J. Lepper, "Should charities use cryptocurrencies?" (16 April 2021), *charitydigital.co.uk*, <https://charitydigital.org.uk/topics/topics/should-charities-use-cryptocurrencies-8599> [Accessed 7 June 2022].

⁵⁵ For example, the University of Edinburgh's Blockchain Technology Laboratory, together with a commercial partner, developed the Ouroboros suite of blockchain protocols that underlie Cardano. See Professor A. Kiayias, "Turning Academic Research into Cutting Edge Technology: Blockchain Technology Laboratory and the Cardano Ledger" (29 March 2021), *ed.ac.uk*, <https://blogs.ed.ac.uk/blockchain/2021/03/29> [Accessed 7 June 2022].

if a fund earned staking revenue from delegating proof-of-stake currency and allocated a share to a UK charitable limited partner. Because such funds are usually fiscally transparent for UK tax purposes, their income is considered to arise to each limited partner, and a charitable limited partner will be considered to earn a share of the fund's staking revenue as if the partner itself had staked its own coins.⁵⁶ Indeed, allocations of staking revenue by venture capital funds to charitable limited partners might impose risk on trustees, who may not have been aware of its uncertain UK tax treatment when approving the original investment.⁵⁷ Several fiscally transparent funds have been promoted recently that aim to profit from the blockchain and cryptocurrency "ecosystem", with warnings that they may earn revenue from "airdrops", "hard forks" or staking. Given that these promotions rarely include any discussion of UK tax consequences (although they often disclose US ones), trustees of endowed UK charities should be alert to the UK direct tax consequences of receiving allocations of income from such funds.

More broadly, even if no charities hold proof-of-stake coins or accrue partnership allocations of income from them currently, many trustees who wish in future for their organisations to hold cryptocurrency are likely to favour proof-of-stake coins for environmental, social and governance reasons. Holding Bitcoin and other proof-of-work coins contributes to the environmental damage caused by the enormous amount of energy consumed by miners.⁵⁸ Indeed, an influential commentator has recently questioned the viability of Bitcoin's use case as a global payments system due to its environmental impact.⁵⁹

The tax consequences to a charity of receiving reward coins from delegation

HMRC has issued guidance for individuals and corporations on how to treat revenue from proof-of-stake coins, without addressing the particular considerations for charities.⁶⁰ Accordingly, we aim to extrapolate the guidance on staking revenue for taxable persons so as to apply to charities.

HMRC thus addresses the amount of taxable income that arises to businesses from staking proof-of-stake coins:

*"If the mining activity does not amount to a trade, the pound sterling value (at the time of receipt) of any cryptoassets awarded for successful mining will generally be taxable as income (miscellaneous income) with any appropriate expenses reducing the amount chargeable."*⁶¹

HMRC reaches the same conclusion, ignoring the effect of dilution, in its cryptoasset guidance for individuals.⁶² This view of the proper measure of income is shared by the US Internal Revenue Service (IRS) in a statement applicable to the analogous mining for proof-of-work reward coins.⁶³ Moreover, in considering a coin-holder's receipt of airdropped new cryptocurrency coins after the blockchain (on which

⁵⁶ See, e.g., HM Revenue and Customs, *HMRC Partnership Manual PM131530* (London: The Stationery Office, 2016), "LLP: Partners' Basis Periods, Losses and Overlap Relief: 'Where a partnership carries on a trade or profession each partner liable to Income Tax is deemed to carry on a personal trade or profession'."

⁵⁷ While used to approving investing in venture capital funds that generate standard items of return whose exemption from UK tax is settled, trustees may not be aware of the unsettled charitable tax treatment of various species of return from digital assets. Tax risk to the charity can be mitigated by holding the limited partner interest in a wholly owned subsidiary trading company, as described below.

⁵⁸ See C. Robbins, "Do Cryptocurrencies Have a Dirty Little ESG Secret?" (28 October 2021), *coindesk.com*, <https://www.coindesk.com/markets/2021/10/28/do-cryptocurrencies-have-a-dirty-little-esg-secret> [Accessed 7 June 2022].

⁵⁹ J. Oliver, "Bitcoin Has No Future As a Payments Network, Says FTX Chief" (17 May 2020), *Financial Times*, p.13 ("Sam Bankman-Fried, founder of the digital asset exchange FTX, said the proof of work system of validating blockchain transactions, which underpins bitcoin, was not capable of scaling up to cope with the millions of transactions that would be needed to make the cryptocurrency an effective means of payment.")

⁶⁰ HM Revenue and Customs, *Cryptoassets Manual* (2021), "CRYPTO10000", "20000", "30000".

⁶¹ HM Revenue and Customs, *Cryptoassets Manual* (2021), "CRYPTO40250 — Cryptoassets for Businesses: Staking" (emphasis added). Despite referring to mining, HMRC is addressing proof-of-stake reward coins here: "Some types of mining require 'staking' of exchange tokens which weights the entitlement to newly forged tokens."

⁶² HM Revenue and Customs, *Cryptoassets Manual* (2021), "CRYPTO21200 — Cryptoassets for Individuals: Income Tax: Staking": "If the activity does not amount to a trade, the pound sterling value (at the time of receipt) of any tokens awarded will be taxable as income (miscellaneous income) with any appropriate expenses reducing the amount chargeable."

⁶³ I.R.S. Notice 2014–21, 2014–16 I.R.B. 938, Q&A 8: "[W]hen a taxpayer successfully 'mines' virtual currency, the fair market value of the virtual currency as of the date of receipt is includible in gross income."

it holds legacy cryptocurrency coins) experiences a hard fork, the IRS, similarly ruled the measure of taxable income to be the fair market value of the new coins when recorded on the ledger (if the coin-holder has dominion and control of them at that time), ignoring the dilutive effect of the new currency on the value of the old coins.⁶⁴ There is no reason why HMRC would not also apply this view of the measure of income to charities and universities.

HMRC's position on the measure of income from reward coins imposes an over-inclusion of income, which will increase as the participation rate in delegation increases. Thus, as illustrated above, if 100 per cent of coin-holders delegate their ADA, none of them will have any economic income as a result of receiving reward coins but all of them will need to include the value of their reward coins on the day of receipt for UK tax purposes. Over-inclusion will be less, but meaningful, with the reported ADA participation rate of 71 per cent. Taxable coin-holders in either scenario would be well advised to self-help by selling their reward ADA at year's end; charities and universities, however, should sidestep taxable income by sheltering under any available charitable exemption.

Charities and universities do not benefit from an overarching principal of non-taxation; rather each item of their income needs to be categorised so as to fall within a number of specific statutory exemptions.⁶⁵ The categories of exempt savings and investment income do not easily reach staking revenue.⁶⁶ One potential avenue would be the combined exemption for a modest amount of income from non-charitable trading and miscellaneous income that is not otherwise exempt, if applied solely for charitable purposes.⁶⁷ Both limbs of this exemption taken together would appear to embrace the alternatives suggested in HMRC's guidance on staking for businesses and individuals, which analyses the return under the alternatives of trading or miscellaneous income.⁶⁸

The scope of this "small trade/miscellaneous income exemption" is limited to an amount obtained by comparing the charity's gross income from these activities with its gross income from all sources in the year (excluding capital receipts). The exempted amount that is available to a charity is 25 per cent of total gross income under accounting rules, starting at £8,000 for a charity with £32,000 of gross income or less, rising in steps to the top exempted amount of £80,000 for a charity whose gross income is £320,000 or more. It bears repeating that this cap relates to gross income, so the amount of tax actually saved in a particular case will be reduced in light of any allowable expenses that can be offset (probably minimal when delegating ADA). If the upper limit on permitted turnover from trading/miscellaneous income sources is breached by £1, the entire net income from them becomes taxable unless the charity can demonstrate that it reasonably expected at the start of the year that the limit would not be breached.⁶⁹

The miscellaneous income limb of this exemption is defined by reference to approximately 40 other provisions.⁷⁰ To avoid difficulties associated with qualifying reward coins as miscellaneous income under those provisions, it may be sensible for a charity to take the position that its action of delegating ADA is non-charitable trading and to seek exemption under the trading limb of the small trade/miscellaneous income exemption, assuming that it applied the income to its charitable purposes. If a charity were to apply the small trading exemption successfully to staking revenue, it would not necessarily follow that a subsequent disposal of the delegated or reward coins used in the generation of the trade will also be treated as trading income; rather the disposal would still follow the basic principles applying to chargeable

⁶⁴ I.R.S. Rev. Rul. 2019–24 (Situation 2), 2019–44 I.R.B. 1004.

⁶⁵ There is no blanket exemption from tax for charities, rather the reliefs are peppered throughout ITA 2007 for charitable trusts and CTA 2010 for charitable companies.

⁶⁶ See ITA 2007 s.532 (for charitable trusts); CTA 2010 s.486 (for charitable companies).

⁶⁷ ITA 2007 ss.526–528 (for charitable trusts) and CTA 2010 ss.480–482 (for charitable companies). If a charity were considered to trade by earning revenue from delegating ADA, this trade would not be considered to carry out the charity's primary purpose.

⁶⁸ See HM Revenue and Customs, *Cryptoassets Manual* (2021), "CRYPTO21200 — Cryptoassets for individuals: Income Tax: staking"; HM Revenue and Customs, *Cryptoassets Manual* (2021), "CRYPTO40250 — Cryptoassets for businesses: staking".

⁶⁹ ITA 2007 s.528(1)(b) (for charitable trusts); CTA 2010 s.482(1)(b) (for charitable companies).

⁷⁰ See ITA 2007 s.1016 (for charitable trusts); CTA 2010 s.1173 (for charitable companies).

disposals and could therefore still benefit from the capital gains tax exemption for charities.⁷¹ Whether taxed as a corporation or a trust, a charity should be exempt from corporation tax or capital gains tax on its disposal gains if they are applicable to, and applied for, charitable purposes.⁷²

Could a charity claim successfully that staking is a trade? Pension scheme precedent

HMRC's guidance on whether earning proof-of-stake reward coins constitutes a taxable trade (it is unclear whether it is concentrating on validating or delegating or both) states that in a particular case the following factors are relevant: degree of activity, organisation, commerciality and risk.⁷³ General tax principles often attribute the activities of an agent to its principal. If a validator is considered to trade as a result of repeatedly providing validation services to the network in exchange for reward coins,⁷⁴ an agency analysis would suggest that a delegating coin-holder (as principal) would take on the trading activity of the validator (as agent).⁷⁵

On the other hand, a leading case on the taxation of pensions schemes (which like charities benefit from a number of reliefs from income tax and capital gains tax), *BT Pension Schemes*,⁷⁶ suggests that a charity's overall "investment" motivation for delegating ADA might trump an agent attribution analysis. In that case, a large pension scheme, intending to own shares in the constituents of the UK stock market reflecting the FT Actuaries All-Share Index, routinely agreed with lead underwriters of share offerings by listed UK companies, in exchange for a fee, to purchase any unsold shares. When the scheme was called on periodically to make such purchases, it usually retained the shares so as to match the relative change in the Index caused by the offering.

The Court of Appeal might have concluded that the pension scheme's making repeated standby promises for a fee, plus occasionally purchasing unsold shares, constituted participating in a trade, relying not only on the activity of the scheme itself but also attributing to it some or all of the activity of its agent, the lead underwriter. Instead, the Court held that the fees did *not* constitute trading income to the scheme because its goal in sub-underwriting was to maintain its targeted proportion of all UK shares in issuance; and so, putting itself at risk, for a fee, to buy unsold shares supported achieving its investment goal. Thus, the sub-underwriting activity formed "an integral part of the investment process and took its colour from that process", and the scheme was not considered to earn trading income from the fees.⁷⁷

Applying the holding of *BT Pension Schemes* to a charity's receipt of reward coins from delegating its ADA to a validator, one might conclude that the delegation was driven mostly by the charity's desire to earn yield and avoid being diluted if it failed to delegate. This might suggest that characterising the income from the delegation should take colour from the charity's investment motivation in holding ADA on its balance sheet and so fall outside of trading. This analysis would lead to needing to proceed under the miscellaneous income limb of the exemption, categorising the receipt of reward coins within one of the 40-odd provisions mentioned above.

⁷¹ See HM Revenue and Customs, *Cryptoassets Manual* (2021), "CRYPTO40250 — Cryptoassets for businesses: staking" ("If the miner keeps the awarded assets, they may have to pay Capital Gains Tax (CGT) or Corporation Tax on Chargeable Gains (CTCG) when they later dispose of them.")

⁷² TCGA 1992 s.256(1).

⁷³ See HM Revenue and Customs, *Cryptoassets Manual* (2021), "CRYPTO21200 — Cryptoassets for individuals: Income Tax: staking"; HM Revenue and Customs, *Cryptoassets Manual* (2021), "CRYPTO40250 — Cryptoassets for businesses: staking". Risk can be interpreted as incurring the risk of loss. If the delegation of a proof-of-stake coin to a validator raises no realistic risk of slashing, as has been reported is the case for ADA, it is difficult to identify any risk of loss incurred by the delegator. See "Why Cardano does not need slashing" (3 April 2021), [cardanians.io, https://cardanians.io/en/why-cardano-does-not-need-slashing-152](https://cardanians.io/en/why-cardano-does-not-need-slashing-152) [Accessed 7 June 2022].

⁷⁴ The systematic repetition of a transaction is a pointer towards trading. See HM Revenue and Customs, *Business Income Manual* (London: The Stationery Office, 2013), para.BIM20235, "Meaning of Trade: Badges of Trade: Repeated Operations" (citing *Pickford v Quirke* (1927) 13 T.C. 251).

⁷⁵ The New York State Bar Association (Tax Section), whereas it acknowledges the agency analysis, also raises the possibility that delegating proof-of-stake coins is better characterised as a license because the "right to validate transactions embedded in the cryptocurrency is an intangible property right that is transferred to the validator and used by the validator to earn staking rewards." *Report on Cryptocurrency and Other Fungible Digital Assets* (2022), p.52 (footnote omitted).

⁷⁶ *Trustees of BT Pension Schemes v Clark* (HM Inspector of Taxes) [2000] P.L.R. 157; [2000] W.L. 552 (Court of Appeal).

⁷⁷ *BT Pension Schemes* [2000] P.L.R. 157 at [33].

On the other hand, if the holding of *BT Pension Schemes* could be properly distinguished from the case of a coin-holder's activity of delegating ADA, the agent attribution analysis might lead to a charity or university properly asserting that it is trading by attribution and so entitled to the small non-charitable trade exemption.

If there were any doubt on the availability of this exemption, or if the permitted annual turnover from trading and miscellaneous income were exceeded, then a charity should mitigate the over-inclusion of income arising from HMRC's view on the proper measure of income from reward coins by selling them at year end and buying them back.⁷⁸

Moreover, a charity with a sizeable holding of proof-of-stake coins that it wished to stake for reward might profitably hold them in a wholly owned subsidiary trading company. By this we mean a subsidiary that the parent charity has established with sufficient equity or loan capital in view of the subsidiary's business activities, so that the investment constitutes a "type 12" approved charitable investment for the parent charity (discussed further immediately below).⁷⁹ If such subsidiary converts reward coins to fiat currency and donates the money out of its distributable profits to its parent charity within nine months of the close of the year in which it earned them, it should be able to deduct such donation from its total profits for the prior year and so reduce its tax liability.⁸⁰

Cryptocurrency as an approved charitable investment

A charity's receipt of staking revenue from cryptocurrency that it owns raises the additional tax question of whether its holding of coins constitutes an investment and, if so, fails to qualify as an "approved charitable investment", which would lead to being treated as "non-charitable expenditure".⁸¹ If this were the case, charitable exemptions claimed by the charity on its other income or gains could be disallowed in part. The answer to this question may depend on how the charity comes into ownership of the coins, for example whether the charity purchases the coins or acquires them as a gift. HMRC confirms that a charity's receipt of *gifts* of investments in securities, shares or real estate does not constitute

"... an investment by the charity. So the charity won't be treated as having made an investment that is not a 'qualifying investment' for the purposes of Sections 558 and 559 Income Tax Act (ITA) 2007 or Sections 511 and 512 Corporation Tax Act (CTA) 2010 where the cost of non-qualifying investments is treated as 'non-charitable expenditure' and can give rise to a tax charge."⁸²

We raise this point as worthwhile to be considered in the specific case.⁸³

Conclusion

UK charities and universities will increasingly find themselves owning proof-of-stake coins such as ADA and earning yield thereon by delegating them to validators. Donations of cryptocurrency by benefactors and graduates are likely to increase in future, even though they are not currently considered to qualify for Gift Aid or income tax relief. Some universities will own such coins as a result of their blockchain research

⁷⁸ If not all of the staking revenue is sheltered by the small trade/miscellaneous income exemption, the treatment of allowable expenditures and capital allowances will differ depending on whether the revenue is considered to arise from trading or miscellaneous income. See Sultman and Mullarkey, "Cryptoassets: Examining HMRC's Manual" [2021] Tax Journal 12, 13.

⁷⁹ ITA 2007 s.558 (for charitable trusts); CTA 2010 s.511 (for charitable companies).

⁸⁰ See J. Kessler, "Corporate Gift Aid — Company wholly owned by charity" in *Taxation of Charities and Nonprofit Organisations* (Oxford: Key Haven, 2022), Ch.17.5.3.

⁸¹ ITA 2007 ss.543, 547 (for charitable trusts); CTA 2010 ss.496, 500 (for charitable companies).

⁸² HM Revenue and Customs, *Charities: Detailed Guidance Notes on How the Tax System Operates* (London: The Stationery Office, 2013) Ch.5 "Giving Land, Buildings, Shares and Securities to Charity", para.5.24.3.

⁸³ If a charity invests in a venture capital fund that allocates staking revenue to it, it should consider whether its limited partnership interest constitutes an approved charitable investment. See generally C. Black, "Investing for Charities — the Tax Dimension" (7 December 2018), *farrer.co.uk*, <https://www.farrer.co.uk/news-and-insights/investing-for-charities---the-tax-dimension/> [Accessed 7 June 2022].

efforts and some endowed charities will earn staking revenue as a result of investing in venture capital funds.

A charity or university should be aware that its share of reward coins from staking constitutes income in the amount of their sterling equivalent value on the day of receipt according to HMRC's guidance. This amount of income, which will not fall easily within a charitable exemption for investment income, will almost certainly overstate the recipient's economic income after taking into account the dilutive effects on the value of its existing coins. In that case, the charity or university should consider: (i) selling its coins and buying them back at year end; or (ii) sidestepping the question of a charity's earning taxable income either by taking advantage of the small trade/miscellaneous income exemption or by locating the coins in a wholly owned subsidiary trading company that would donate its distributable profits in sterling periodically to the parent charity and deduct the donation from its profits for corporation tax purposes.