Submission to Treasury Select Committee Call for Evidence on Digital Currencies

Charities Aid Foundation

April 2018

Introduction

0.1 Charities Aid Foundation ("CAF") is a leading international civil society organisation (CSO). Our mission is to motivate society to give ever more effectively and help transform lives and communities around the world. We work to stimulate philanthropy, social investment and the effective use of charitable funds by offering a range of specialist financial services to charities and donors, and through advocating for a favourable public policy environment.

0.2 CAF's in-house think tank, Giving Thought, undertakes policy research and analysis to understand the macro trends affecting philanthropy and the work of charities. One of our key areas of focus is exploring the impact of disruptive technologies on the work of charities and the ways in which people are able to support them.

0.3 We first started looking at the possibility of harnessing cryptocurrency for donations back in 2014, and have subsequently published a wide range of papers and blogs on the wider applications of blockchain technology for the work of charities.[1] We have become recognised for our expertise on this topic, and this has resulted in us giving presentations and briefings around the world, as well as extensive media comment.

0.4 We have kept our submission focused on the impact on charities and charity donors. This reflects our particular expertise, but also the fact that we believe there are significant impacts in this area that need to be highlighted so that they are not marginalised by a focus on commercial applications.

0.5 In this submission we will highlight a range of existing and potential applications of blockchain technology and cryptocurrency to the work of charities and the ways in which people are able to support them. We will outline both the opportunities and the challenges associated with each of these.

0.6 Any mention of specific organisations, projects or platforms does not constitute an endorsement of their work.

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[1] All of our publications on blockchain technology, cryptocurrency and charity are vailable at:
https://www.cafonline.org/about-us/publications/blockchain

Applications of Blockchain Technology for Charities and Donors

1) Accepting donations in existing cryptocurrency

Opportunities:

1.1 Perhaps the most straightforward opportunity for charities is simply to find ways of enabling donations of existing cryptocurrencies such as Bitcoin, Ether and so on.[2] Charities operate in an increasingly competitive marketplace for fundraising, so any opportunity to tap into a potential new source of income is likely to be very appealing. The last few years has also seen the creation of a new group of "crypto-rich" individuals, who were early adopters of cryptocurrency and, as a result of the enormous increase in value of the assets, have found themselves extremely wealthy. Most of these individuals will not have expected their wealth; and based on prior research and experience this may make them particularly amenable to the idea of giving some of it away to support good causes. Hence there is a strong argument for charities finding ways to help them do so.

1.2 There is some evidence already of the potential for "cryptophilanthropy". Fidelity Charitable, a US provider of philanthropy products, started taking donations of Bitcoin (and latterly, other cryptocurrency) into its Donor Advised Funds in 2015, and in 2017 received $69 million in this form - making cryptocurrency their fastest growing donated asset type. It was also reported in December 2017 that a new philanthropic fund ("The Pineapple Fund") had been endowed using $86 million of Bitcoin by an early adopter of the cryptocurrency known only as "Pine".[3] The fund was oversubscribed and ceased accepting grant requests a month later.

1.3 Another reason charities may find the idea of harnessing cryptocurrency donations appealing is because they believe that by doing so they could tap into a pool of younger donors. This might be because younger people are more likely to be existing cryptocurrency users,[4] or because utilising cryptocurrency is seen as a way of

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[2] For a more detailed exploration of this issue, see Davies, R (2018) "From HODL to GIEV? The opportunities and challenges of cryptophilanthropy" *CAF Giving Thought* blog.
[3] https://pineapplefund.org/
[4] One survey suggested that a third of millennials are considering investing in Bitcoin by the end of 2018, Little, S. (2017) "Bitcoin latest: Third of millennials will be invested in the cryptocurrency in 2018". *Independent*, 14th December.

making the donation experience more appealing to a younger generation who expect a technology-first approach. Given that charities often struggle to engage these younger donors, any opportunities to do so may be seen as worth exploring.

1.4 Giving cryptocurrency directly, rather than converting it into fiat currency and then donating that, potentially has significant tax benefits for donors. HMRC currently views cryptocurrencies as assets, so (as far as the available information tells us) they are treated akin to shares in terms of relief on donations. That means that a donor would be able to avoid Capital Gains Tax liability on any increase in value of the asset (which in the case of a cryptocurrency early adopter could be enormous), and also offset the Fair Market Value (FMV) of the asset against their income tax liability. This might be a powerful incentive to convince the newly crypto-rich to give some of their wealth away to support good causes. It is important that there is clear guidance on these issues from HMRC, and that this is updated to reflect any significant changes in the tax treatment of these assets.

Challenges:

1.5 One immediate challenge for charities who want to accept crypto-donations is the understanding and technical knowledge required. The barriers to entry for using cryptocurrency have certainly reduced in recent years. However, many charities still suffer a significant skills gap when it comes to new technology- the recent Charity Digital Skills Report found that 51% of respondents believed that lack of skills was the biggest barrier to their charity getting the most from technology.[5] Hence, when it comes to cryptocurrency, learning a lexicon of new technical terms and navigating the steps required to set up a wallet is still likely to be seen as challenging.

1.6 Another major challenge for charities considering taking cryptocurrency donations is volatility. The price of Bitcoin, for instance has continued to fluctuated wildly: from a starting point of around $800 in January 2017, the price of a single bitcoin rose to over $19,000 in December of that year, before falling again to just under $7,000 in February 2018.[6] And sometimes these fluctuations in value happen in an incredibly short space of time: on one day in December 2017, Bitcoin lost a quarter of its value.[7] This makes cryptocurrencies a poor store of value at this point in time, so they have to be viewed instead as highly volatile investment assets. Trustees and senior management of an organisation have to consider this in light of their particular

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[5] Amar, Z. & Evans, D. (2018) *Charity Digital Skills Report 2018*.

[6] Higgins, S. (2017) "From $900 to $20,000: Bitcoin's Historic 2017 Price Run Revisited" *CoinDesk,* 30th December

[7] Treanor, J. (2017) "Bitcoin loses a quarter of its value in one day's trading", Guardian, 22nd December.

circumstances, and with reference to their own risk appetite and fiduciary responsibilities, but in most cases it is hard to see how holding cryptocurrency is currently appropriate for charities.

1.7 One possible way round the volatility challenge is simply to turn the cryptocurrency back into fiat currency as quickly as possible, rather than holding on to it. However, given the degree of volatility of many cryptocurrencies, even holding on to them for a very short period of time will make one vulnerable to significant price fluctuations. There may also be challenges in terms of liquidity when it comes to converting cryptocurrency back into fiat – particularly for larger amounts. Some providers offer a solution in the form of an "instant exchange wallet", where any payments received in cryptocurrency are immediately converted into a designated fiat currency (GBP, USD etc.) and then sent to the recipient's bank account.[8] Using a wallet of this kind would allow a charity to take cryptocurrency donations without the need to hold any cryptocurrency. This is the way that Fidelity Charitable in the US enables cryptocurrency donations into its Donor Advised Funds.

1.8 The other major concern for most charities is likely to be how they continue to meet Know Your Customer (KYC) and Anti Money Laundering (AML) requirements. These are vital in terms of ensuring that charities aren't handling money from dubious or criminal sources, which is an important part of maintaining the trust and confidence of donors and supporters. There are concerns that KYC and AML would be much more difficult for cryptocurrency donations than for donations of fiat currency, due to the perception that cryptocurrencies are anonymous and closely linked to criminal activities.

1.9 It is important not to downplay these concerns, as the KYC and AML implications of cryptocurrency are still being worked through by regulators and law enforcement agencies around the world. However, it is worth noting a number of things. Firstly, that many cryptocurrencies (including Bitcoin) are not actually anonymous at all (they are at best *pseudonymous*).[9] Furthermore, a growing level of sophistication among law enforcement agencies means that these cryptocurrencies are actually relatively easy to track.[10] In fact, they may be easier to track than money moved through the mainstream financial system, because the underlying blockchain technology provides a record of all transactions, so a cryptocurrency coin can theoretically be traced all

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[8] NB: at the time of writing, some of the existing products of this kind had been withdrawn or closed to new applicants due to inability to meet demand.

[9] This is not true of cryptocurrencies that are specifically designed to provide anonymity, such as ZCash, Dash or Monero.

[10] Orcutt, M. (2017) "Criminals Thought Bitcoin Was the Perfect Hiding Place, but They Thought Wrong", *MIT Technology Review,* 11th September.

the way back to its creation.[11] This could lead to enhance KYC/AML processes in future.

2) Creating dedicated charitable cryptocurrencies or tokens

2.1 In addition to considering accepting donations in existing cryptocurrencies, a number of organisations have emerged which are seeking to create dedicated "charitable" cryptocurrencies. The exact models for each of these differ, but in general terms they involve creating tokens using an existing blockchain (such as Ethereum) which can then be used to replace the use of fiat currency in at least part of the process of giving money to charity.

2.2 It is important to be clear that the use of cryptographic tokens to enable transparency on a blockchain does not imply that those tokens need also function as a viable currency. This is an additional claim, and one that requires significantly greater scrutiny, particularly if an Initial Coin Offering (ICOs), or other token issuance mechanism is being used to raise development funding through the sale of new tokens that purport to be a currency.[12] ICOs are already an area of intense regulatory scrutiny, due to concerns that they are being used to sidestep controls and regulations within the existing financial system, and being exploited by unscrupulous individuals and organisations for fraudulent ends. It is also far from clear at this point how crypto-tokens should be properly classified: some seem akin to currencies, others to securities and others to usage tokens. Regulatory authorities around the world are currently making efforts to rationalise this landscape, but there is still some way to go. As such, charities and other organisations seeking to promote charitable giving should be cautious about using ICO mechanisms or issuing tokens that purport to be currencies at this point. And if they do wish to engage with this kind of activity, they should liaise closely with the relevant regulatory bodies (such as the Financial Conduct Authority and the Charity Commission).

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[11] The IRS, for instance, has reportedly been using software developed by as a startup called Chainalysis to track Bitcoin transactions since 2015. Higgins, S. (2017) "The IRS Has Been Using Bitcoin Tracking Software Since 2015", *CoinDesk*, 22nd August.

[12] For a more detailed analysis of ICOs in a charity context, see Davies, R. (2017) "Tokens of Goodwill: crypto-tokens, ICOs & blockchain philanthropy", *CAF Giving Thought* blog.

3) Mining Existing Cryptocurrency for Charity

3.1 The way in which existing cryptocurrencies are created is also being used to generate money for charity. The 'mining' process used to create Bitcoin, Ether and so on involves users (originally individuals, but increasingly dedicated mining organisations) offering up processing capacity on their own computer to run software which attempts to solve a particular kind of complex mathematical problem. Some organisations are now offering people the opportunity to use spare capacity to mine cryptocurrency for good causes. For instance an initiative called 'Game Chaingers',[13] led by UNICEF in France, enables gamers to donate spare capacity on the Graphical Processor Units (GPUs) in their computers to mine Ethereum in order to help Syrian children.[14] Similarly, a recently-launched organisation called Cudo Donate aims to enable people to donate their computer processing capacity to mine cryptocurrency which can then go to a nominated charity.[15]

3.2 These initiatives face a number of challenges. Firstly, all the issues outlined above about whether charities can or should accept cryptocurrency donations. Secondly, there is a question about whether mining by individual users can remain feasible. In the early days of Bitcoin, much of the mining was done by regular users on their own computers, but as the value of the cryptocurrency has gone up, much of the mining has become centralised in the hands of specialist miners running huge farms of dedicated processor rigs. Mining other cryptocurrencies, such as Ethereum, has remained more realistic for normal users, but this may not remain the case for long if new specialist processing chips are created that give professional miners a disproportionate advantage.[16] Finally, the process of mining is itself increasingly controversial. Many have now become aware that the proof-of-work consensus protocols used in the mining of Bitcoin and other cryptocurrencies are wasteful by design, and that this has significant environmental implications due to the amount of energy they use.[17]

3.3 There may be ways to mitigate these challenges in future, by using different consensus protocols (such as "proof of stake") or by harnessing renewable energy.

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[13] https://www.chaingers.io/en/index.html
[14] Beaumont, P. (2018) "Unicef recruits gamers to mine Ethereum in aid of Syrian children". *The Guardian*, 6th Feb.
[15] https://www.cudodonate.com/
[16] Biggs, J. (2018) "Ethereum Falls After Rumours of a Powerful New Mining Chip Surface", *TechCrunch,* 27th March.
[17] Hern, A. (2018) "Bitcoin's energy usage is huge – we can't afford to ignore it" *The Guardian,* 17th January.

At least one existing initiative (Cudo Donate) is already using a carbon offsetting scheme in clear recognition of the issues around the environmental impact of mining.

3.4 If challenges such as these can be overcome, then cryptocurrency mining using unwanted processing capacity could be a useful additional (if probably small) source of funding for charities in the future.

4) Creating new digital assets

4.1 Cryptocurrencies are best understood as digital assets, according to a recent announcement from the Governor of the Bank of England. However, the potential to use blockchain technology to create digital assets is not limited to cryptocurrencies. In 2017, a new token protocol on the Ethereum blockchain (ERC 721) allowed the creation of non-fungible tokens for the first time. This has wide ranging implications, because it can enable the creation of unique digital objects. Previously, one of the major challenges with digital objects was that they can be copied multiple times (usually despite the best efforts of people to use rights management software), so they cannot be collectable or have scarcity value (as, for example, a rare book might). However ERC 721 changes that.

4.2 So far, the best known use case of ERC 721 is CryptoKitties: a series of collectible digital cats with unique "genetic" features developed using the protocol. This may sound frivolous, but trading in CryptoKitties has become extremely popular and lucrative. Sales have passed $12 million, and the ten most valuable kitties to date have sold for over $100K each.[18] Trading via the decentralised app (DApp) even proved so popular that it slowed the entire Ethereum blockchain to a crawl through overuse in late 2017.[19] Some experts believe, however, that cryptokitties is merely a harbinger of a far larger marketplace for tradeable, unique digital items in the future (which is presumably why it was recently reported that the DApp had received a $12 million investment from a consortium of well-known technology venture capital firms).[20] Given that other tradeable commodities such as works of art, property and shares are already valuable sources of income for charities, it is important that thought is given to how new digital assets might also be donated for good causes.

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[18] Young, J. (2017) "CryptoKitties Sales Hit $12 Million, Could be Ethereum's Killer App After All", *CoinTelegraph*, 11th December.
[19] Wong, J. I. (2017) "The ethereum network is getting jammed up because people are rushing to buy cartoon cats on its blockchain" *Quartz*, 4th December
[20] Tepper, F. (2018) "CryptoKitties raises $12m from Andreessen Horowitz and Union Square Ventures", *Tech Crunch,* 21st March

5) Radical Transparency

5.1 Blockchain technology can allow for radically-enhanced transparency. The fact that cryptocurrency coins (and potentially other tokens) are unique and non-fungible means that they can theoretically be traced all the way through a system. In the case of charity, this could mean that a donor using a blockchain-based platform was able to track their donation all the way through a recipient charity and see how it was spent. This is in fact the aim of many of the existing blockchain projects in the charity world. These projects are all, to some degree, based on a narrative that there is an issue in terms of the trust people have in charities when they donate to them, and that the radical transparency possible through using blockchain technology is the answer. There is a grain of truth in this narrative, in that there have been a number of widely-reported scandals around the activities of a number of charities in recent years. However, it is important not to overstate the case: CAF's UK Giving Survey 2018, for instance, found that levels of trust in charities have actually remained remarkably consistent.[21]

5.2 Greater transparency, on the whole, is to be welcomed, and many charities would almost certainly be keen to explore whether blockchain technology could be used to enhance their own operations and accountability, if it were done appropriately. However, there are some important questions about the degree to which efforts to utilise blockchain technology to make charitable giving more transparent, if done without proper thought, could have unintended negative consequences. For one thing, they could shift power to donors at the expense of charities. This is potentially problematic given that charities already struggle to convince donors of spending on necessary core costs that they perceive as "overheads" or "administration". This problem would be hugely exacerbated if donors were able to see precisely where their own donation went, and even – potentially – make stipulations about how it was spent that might be overly restrictive or unrealistic.

5.3 There are also circumstances in which a donor or a recipient might justifiably require a degree of anonymity. If, for example, a funder is giving money to support organisations which fight for the rights of gay and lesbian people in a country where homosexuality is illegal, then the recipient organisation and the people it works with would certainly not want details that could be used by the government to identify them published on a public blockchain. Conversely, if a funder is on a list of

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[21] https://www.cafonline.org/docs/default-source/about-us-publications/caf-uk-giving-2018-report.pdf

organisations proscribed as "foreign agents" or similar by a repressive regime, then if they want to continue to support advocacy and rights groups in that country, they need to maintain anonymity with respect to that funding.

6) Reduction of Transaction Costs

6.1 Blockchain is a disintermediating and decentralising technology. As such, one of its main appeals for many commercial businesses and industries is the potential to cut out traditional middlemen, and hence reduce cost. This is the case for charities just like any other organisations; and is particularly true in an international context, where many charities and aid organisations have to deal with long and heavily-intermediated chains of transactions that add significant cost in terms of things like FX and money transfer fees, and result in less money getting to the frontline than they might want.

6.2 This is perhaps why the main focus of activity so far in terms of exploring blockchain within the charity world has been in the aid and international development sector. Organisations like Disberse are trying to use blockchain technology to make aid flows more effective by reducing some of the transaction costs, whilst also enhancing transparency.[22] However, there is also the potential in the longer term to use disintermediation to reduce transaction costs in a domestic charity context too.

7) Moving Money Cross-border

7.1 As well as potentially reducing the cost of moving money across international borders, blockchain technology and cryptocurrency could make it possible to get money into places where it is currently extremely difficult to do so because financial infrastructure is lacking or governance has collapsed. Since cryptocurrencies are purely digital and not issued by a central authority, they are non-geographic, so (at least in theory) it easy to make payments to anywhere in the world where someone is able to access the required technology.

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[22] http://www.disberse.com/

7.2 **This could enable international NGOs and aid agencies to get money into conflict zones and other places where it is needed much more effectively.** However, it is also obvious that there will be concerns about the potential for the technology to be used to bypass the controls within the mainstream financial system, such as sanctions regimes. **Hence it is vital that any charities and funders looking to use blockchain technology or cryptocurrency in this way engage with regulators and law enforcement agencies.**

8) Smart contracts for giving

8.1 A major reason that blockchain technology is seen as having such enormous potential is that it allows for the creation of "smart contracts". These are self-executing computer protocols that perform defined actions when certain set criteria are met (i.e. "If X happens, do Y and Z"). The use of smart contracts is being explored in a wide range of areas, to see whether existing processes can be made more efficient and cost-effective through automation, and whether new processes can be created that lead to entirely new governance models and so on.

8.2 There is potential for smart contracts to be used in a charitable context. For instance, it is possible to structure donations on a "payment by results" basis using smart contracts in such as way that the money is only released to a charity when certain agreed targets are recorded. This is an approach being piloted by the start-up[23] Alice.si in the UK, who created a project in partnership with the homelessness charity St Mungo's where donors through the Alice platform were able to give donations that were held in escrow in a smart contract on the Ethereum blockchain until agreed project targets were met and independently verified.[24] The application to existing payment by results funding models such as Social Impact Bonds (SIBs) is also being explored in various places.

Conclusion and Recommendations

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[23] https://alice.si/
[24] Weakley, K. (2017) "St Mungo's uses blockchain to be transparent about donations" *Civil Society*, 12th May.

Cryptocurrency could represent a new source of income for charities, and blockchain technology has the potential to help charities work better and to make charitable giving more transparent and effective. However, there are also significant barriers to realising this potential, and challenges that those seeking to harness the technology in a charitable context should be aware of. Blockchain technology is still in its infancy, and opinion is divided about whether it will last the distance, and whether cryptocurrency as a use case has any longevity. As such, it is not likely that any charities are going to invest heavily in the technology at this stage. Conversely, however, they should not simply ignore it, as it does have the potential to have a significant impact on their work. The challenge, as it is for charities with any new technology, is to overcome barriers to entry so that they can explore the technology's potential whilst keeping the risks manageable and appropriate. To that end, we have suggested a series of top-line recommendations.

Recommendations

1) **Strengthening the technology skills of charities**: As we have highlighted in our response, many charities still suffer a significant skills gap when it comes to new technology, with a recent Charity Digital Skills Report finding that 51% of respondents believed that lack of skills was the biggest barrier to their charity getting the most from technology. We believe it is integral to the successful delivery of charitable services that staff in the sector are supported to develop these skills, and we would recommend that the Government include this as a key part of its future work to strengthen civil society. Specifically, we would expect to see plans to address this included in the Government's new Civil Society Strategy and a plan to include charities in the development of the new cross departmental Digital Charter.

2) **Ongoing clarity regarding tax treatment of cryptocurrency**: Given the risk involved in exploring opportunities to work with cryptocurrency , it is crucial that there is clear guidance on tax issues associated with engaging with this type of currency from HMRC, and that this is updated to reflect any significant changes. This should be developed with all possible users of the currency in mind, including charities, and should be distributed to reflect this.

3) **Consideration of potential for donating new forms of digital assets**: More widely, given that other tradeable commodities such as works of art, property and shares are

already proving to be valuable sources of income for charities, it is important that thought is given to how new digital assets might also be donated for good causes. We recommend that this thinking is done in a joined up way, involving DCMS, the Treasury and other relevant departments.

4) **Engagement between regulators, law enforcement agencies and NGOs regarding impact of blockchain tech on existing rules regarding international banking and finance**: As we have earlier referenced, blockchain technology and cryptocurrency could unlock many barriers for global NGOs as they make it possible to get money into places where it is currently extremely difficult to do so because financial infrastructure is lacking or governance has collapsed. Alongside this come understandable concerns, however, about the potential for the technology to be used to bypass controls within the mainstream financial system, such as sanctions regimes. Therefore, we recommend that any charities and funders looking to use blockchain technology or cryptocurrency in this way should engage with regulators and law enforcement agencies, and that these bodies actively seek input from charities when developing guidance and legislation.

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