

5 December 2021



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The Problem with Crypto-Carbon

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By now you'll probably be aware that Blockchain has arrived to disrupt the carbon markets: there's a whole list of startups who are looking to tokenise (I guess that's what you call it) carbon offsets and turn them into a fungible digital asset that can be traded anywhere.

And if you've read my earlier blogs, you'll know that I'm not convinced that the carbon offset market is really suitable for standardisation just yet. There are too many different attributes, and combinations of attributes, attached to each offset to make streamlining them all that easy.

It's up to the buyers, mainly. They have to be persuaded that buying a single "vanilla" futures or spot contract will result in them offsetting their carbon footprint with something that they actually want to be associated with.

What these standardised contracts are offering is "eligibility" without any more details, which is fine in itself but which may not yet be something that a lot of ESG-focused buyers are ready to accept.

And how is a crypto-enabled offset any different from a "vanilla" futures contract? Can you peek inside to see what project it came from **before** you buy it? Where is the added value compared to, say, a GEO futures contract?

Crypto, blockchain, whatever you want to call it, isn't answering the reputational questions that carbon offsets pose.

In fact it's worth reading the ultimate word on the entire subject of crypto-carbon here.

Looking at the various initiatives out there, ranging from KlimaDAO to AirCarbon, the common denominator seems to be that blockchain is applied to carbon offsets **after** they've been generated. In other words, none of the advantages that blockchain purports to offer are incorporated into the product chain until after it's been created.

What happens is that 99% of the carbon offset's life, from the project developer deciding what project type to implement, which standard to adhere to, through the whole monitoring, reporting and verification stages, through to the issuance of the offset by the relevant standard, still uses old-school chain of custody processes. PDFs, uploaded reports, etc.

It's only **after** the offset has been issued, that smart crypto folks acquire the offset, turn it into electronic data and tokenise it.

Once a carbon offset has been issued, it's completed 90% of its life-journey. All that

remains is for some well-meaning company to buy it, lodge it in its registry account and then retire it to offset emissions from a specific period.

So what advantages does crypto's end-of-life tokenisation bring to carbon offsets? Makes it easier to trade, perhaps, makes it easier for someone to turn an offset into an NFT and make a fortune selling it, perhaps.

But surely in order for blockchain to really demonstrate its usefulness, it needs to be applied to the whole life cycle of an offset. Embedding all the documentation and proofs into a blockchain during the life of the offset is where the efficiencies and fungibility would come from.

I'd argue that even then, there would still be question marks over the offset's provenance that a buyer would need to have answered before they decided to buy. Maybe those worries will diminish over time, but not just yet.

To be fair, even the crypto startups recognise that they aren't moving the needle yet: KlimaDAO says on its blog:

"Blockchain can and will open up new ways for managing our resources and collaborating across networks in the coming years. It will be the foundation for us to efficiently coordinate resources, outpace stale bureaucratic and political processes, and remove the need to jump through hoops required to get exposure to the low carbon economy.

Lots of use of the future tense in there. Outpacing the UNFCCC's processes seems a tall order right now, especially when in many, many countries the UN is seen as the sole guardian of developing countries' rights.

So really, crypto and blockchain aren't actually answering any questions yet. So far they're just spraying brightly-coloured glitter over what is a pretty utilitarian asset, and not (yet) contributing to the process of manufacturing that asset.

They're just leveraging the latest fintech hype by stamping "crypto" all over what is still an analogue product. So we need to wait and see.

Now, in the wake of COP26, the world of carbon offsets is about to get a whole lot more complicated.

The voluntary carbon offset market has been happily expanding for several years without any complications from the world of compliance markets, with the exception of the CORSIA system.

But the completion of Article 6 of the Paris Agreement means that a global compliance offset market is going to emerge, and there are going to be two different outlets for these carbon credits.

Firstly, voluntary buyers. Just as we were seeing before COP, corporate buyers ranging from oil companies looking to sell carbon-neutral crude oil to taxi firms offering net-zero rides home on a Saturday night are all happily buying offsets from projects around the world.

What Article 6 does is open up a second, alternate market for these very same offsets. But this time, it can be for compliance with national carbon-cutting goals. Switzerland, for example, has been doing deals with a number of developing countries to buy carbon reductions to set against its own targets. More will follow.

So voluntary buyers are going to start competing with mandatory/compliance buyers, very possibly for the exact same offsets. The procedures to verify and issue carbon offsets to the voluntary or to the Article 6 markets may not be very different, and this is going to present some participants with an interesting dilemma.

Take KlimaDAO, for example. One of the goals of this initiative is to soak up the immense surplus of old offsets generated from outdated projects that are no longer really “additional”, that is, that no longer really need carbon finance to be profitable.

Take renewable energy, for example. Since offsets first started being used, solar and wind power costs have fallen so much that now they are cheaper than some existing power sources such as coal and gas.

So soaking up these old, nearly irrelevant carbon reductions is a good thing; they get in the way of investments in new, more “additional” projects such as forestry.

But what happens when Klima DAO and other fintechs start buying into Article 6 offsets? For a start, they’ll help drive up the price. That might be good because a higher price will make even more offset projects financially viable.

But at the same time, a higher carbon offset price may actually prevent some countries – mainly developing countries – from buying them to meet their own climate goals.

If you’re an emerging economy that has a gap to fill in order to achieve your Paris Agreement target, watching the price of carbon offsets increase because a bossload of carbon credits is being soaked up by developed country investors is not going to be very pleasant.

And if that emerging economy decides to invest in projects at home to reduce emissions, instead of buying credits in the market, the cost of that project has gone up because higher offset prices have encouraged lots more project developers to get into the market.

So there’s a kind of climate justice angle to these crypto initiatives that I’m not entirely comfortable with. It’s all right if the bumps and bruises are being felt in developed countries, because they have a historical responsibility for the impacts of climate change. But to

handicap a developing or emerging economy's efforts to do something about climate change isn't really the same thing.

One of the things that the last two years of watching retail investors in equities and crypto has taught, is that there is a ruthless focus on returns that doesn't really sit well with ethical investing.

Don't get me wrong: I'm entirely in favour of leveraging the power of blockchain to make the process of cutting emissions more efficient. Using the technology to make the whole monitoring, reporting and verification of emission reductions more efficient, for example, seems absolutely spot-on.

And one day, when corporate clients are less concerned about the reputational risk of buying the wrong kind of offset, maybe blockchain will work from cradle to grave.

But bolting crypto-finance on to the rear end of the carbon offset horse is kind of the equivalent of sticking "e-" in front of your company name, like everyone did 20 years ago. It took a complete collapse of the first e-commerce model to teach us all how to actually use the internet for business, and it wouldn't surprise me if the same thing happens in crypto-carbon.