

Blockchain and carbon markets: successful union or missed opportunity?

Blog post by Giulia Pasquali, 29 April 2022

As part of their efforts to tackle climate change, businesses are increasingly relying on the buying and selling of credits to offset emissions. This approach was developed at COP26 last year to create new market mechanisms underpinning Article 6 of the Paris Agreement. Amid rising concerns that the lack of transparency and oversight of offsets might lead to greenwashing, the possibility of tying carbon credits to blockchain technology to enhance their traceability is being explored. As the appeal for digital tokens in this space grows, so too does the urge to regulate offsetting practices. In turn, providers of blockchain technology will have to prove themselves as trustworthy players in front of policymakers if they wish to continue to operate in carbon markets.

The demand and cost of offsetting carbon emissions are increasing rapidly, with prices of nature-based offsets having tripled between June 2021 and January 2022. Yet, environmental groups are expressing concern that an overreliance on carbon offsets could disincentivise firms from taking direct action to reduce their carbon emissions. There is also growing scepticism over the real carbon-removing credentials of projects, with the lack of transparency and global oversight making the effectiveness in cutting emissions hard to measure. At this stage, the industry is characterised by a series of private-sector, voluntary standard bodies that generally lack consistency and are unable to establish internationally accepted rules and mechanisms for offsetting practices.

The emerging industry response to the issue of offsets' lack of transparency has been to virtually tie carbon credits to digital tokens. This involves removing carbon credits from the existing market and putting them on a blockchain where they can be bought with cryptocurrency, enabling traders to speculate on the price of a tonne of carbon. Supporters of cryptocurrency initiatives for offsetting purposes claim that blockchain technology, due to its traceability and publicly accessible records, can make offsetting practices more transparent and verifiable, thereby improving the quality and driving expansion even further.

Doubts about this approach have been raised, however, on several fronts. Most commonly it is pointed out that cryptocurrencies such as Bitcoin are extremely carbon-intensive, thus undermining the technology's ambition to be a driver of the green transition. Environmental experts have voiced their concerns about the spread of poor-quality digital credits on the market, which, by being put on blockchain, are removed from the oversight of the carbon standard that had issued them and can therefore be misused. Some carbon accounting standard organisations share these concerns and warn that, once offsets are traded on a blockchain, it becomes impossible to gauge their environmental benefits due to the lack of oversight.

Against this background, the need to regulate offsetting practices is slowly developing. The European Union is progressing towards defining rules in this space, with the commission taking a first step last December by proposing a new regulatory framework for the certification of carbon removal projects as part of a broader plan to create demand for offsets that would be generated by

European farmers and forestry companies. Future regulation will reshape criteria for offsets and could pose a risk for businesses operating in carbon markets, including fintech companies. For example, they might incur additional administrative and operating costs emerging from the need to meet new regulatory requirements, or they might even be removed from carbon markets altogether if they fail to prove that they can be relied upon to enhance offsets' transparency.

As the urge for a global offsetting regulatory framework intensifies, providers of blockchain technology can capitalise on the need for more transparent practices but will have to demonstrate to lawmakers that the technology's potential to drive climate action is greater than the risks it poses.