Bitcoin and the planet – has anything changed?

Published 26 May 2021

WisdomTree
Contributor

In March, we published an insight discussing ESG (Environmental, Social & Governance) (specifically environmental) implications of investing in bitcoin. At the time, many were asking about Tesla's investment and embrace of the crypto asset in light of various grumblings on the potential environmental impact of the Bitcoin network. In our insight, we walked through what we know about the network, mining and the missing pieces to understand bitcoin's true impact on the environment today and in the future. We noted Tesla's embrace of Bitcoin as a source of comfort for ESG-conscious investors.

Now that Elon Musk and Tesla have retracted (some of) their support, were we wrong?

To summarize the relevant facts for this discussion:1

- As a proof-of-work blockchain, bitcoin consumes energy; however, energy consumption does not necessarily equal polluting emissions.
- Bitcoin mining, by its nature, is well-suited to consume renewable and sustainable energy.
- There is not an inherently linear relationship between the number of bitcoin transactions and energy consumption. Extrapolating an "emissions per transaction" ratio can be misleading, especially in comparison to high volume, small value payments networks like Visa.
- For this reason and others, comparisons with existing financial networks and assets are often misleading. These comparisons may leave out the true costs of securing a financial network, for example.
- A portion of bitcoin mining is certainly powered by the burning of coal and other polluting energy sources in China and elsewhere.
- Today, we do not know bitcoin's mix of energy and consequent emissions impact. Over time, we would expect this to shift towards renewables if the network hash rate continues to migrate to western countries and renewable energy becomes cheaper than "dirty" energy (through technological developments or state-imposed costs).

Has anything changed? Reports of specific examples of polluting energy sources powering mining operations, such as those in Xinjiang, can be troubling, as they can be for any industry that relies on these sources. Developments in China have been worth monitoring as the government in Inner Mongolia banned bitcoin mining in order to meet emissions targets, good news for those concerned about the environmental impact.2 Some prominent American firms, like Square, have continued to work on efforts to expand environmentally-conscious bitcoin mining.3 Many (admittedly pro-bitcoin) people suggest bitcoin can incentivise further renewable energy development as a cheaper energy resource for miners. This would be a welcome development.

This all naturally leads to the question – “Is it worth it?” For many, a decentralized network for storing and transacting value has immense value and the related asset merits inclusion in investment portfolios. Others may disagree. Given what we know today about the state of bitcoin and where we believe it is heading, we do not think investors are necessarily abandoning ESG principles by owning bitcoin.

1 For a deeper dive on these facts, we would recommend some of Nic Carter’s writing, recently “How Much Energy Does Bitcoin Actually Consume?” (Harvard Business Review, May 2021).

2 David Pan, “Chinese Crypto Miners Face Unstable Regulatory Environment”, Coindesk, April 2021.

3 Bitcoin Clean Energy Investment Memorandum, April 2021.

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