

“Crypto” Is *Losing*

BY CHI LO

The issues are climate and trust. But the crypto community is fighting back.

Privately issued cryptocurrencies, notably bitcoin, have generated a frenzy of excitement, with the bitcoin mania even being (rightly) compared to the tulip mania in seventeenth-century Holland. What the crypto-aficionados have ignored is an imminent development—the world’s monetary authorities, including the U.S. Federal Reserve and the European Central Bank, have started to explore the idea of developing central bank digital currencies.

China in this regard is the first mover. The People’s Bank of China started experimenting with its official digital currency in major cities in 2017. The Central Bank of the Bahamas has gone even further, having fully issued a CBDC dubbed the “sand dollar” for circulation. Increasing regulatory control, due to central banks protecting their economic policy sovereignty and national governments controlling climate changes, is an imminent risk that cryptocurrencies face.

In particular, China’s official digital currency is “anti-crypto.” With Cryptocurrency, notably bitcoin, anonymity comes without any recourse or protection against theft, loss, or other forms of financial crime. This is creating

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an inherent risk which the crypto market is trying to fix. Ironically, the solutions should bode ill for cryptos by destroying their untraceable anonymity.

The starting point for bitcoin, and cryptos in general, is the loss of trust in the government institutions behind money in the developed world since the 2007–2008 financial crisis. Bitcoin has emerged as a new type of institutional arrangement for players to agree on the value of money without the backing of public institutions such as central banks.

In the longer term, if this “crypto/bitcoin protest” forces countries to improve their economic management and strengthen their institutional frameworks, cryptos could be marginalized by CBDCs which will feature “controllable anonymity.” China’s CBDC, officially called Digital Currency Electronic Payment and dubbed e-CNY by the markets, also highlights the cryptos’ inherent risks that could potentially lead to their demise when public trust in government institutions can be re-established.

BITCOIN’S ENVIRONMENTAL COST

Bitcoin’s “mining” process, which determines its finite supply (฿21 million by 2040), comes at significant environmental cost in terms of massive electricity consumption, which has risen sharply over the years. The Cambridge Centre for Alternative Finance estimated that the bitcoin mining industry burned through about 143 terawatt-hours of electricity per year as of May 2021, or 0.6 percent of the world’s total energy consumption. By comparison, Australia’s main electric

grid uses less than 200 terawatt-hours a year and the whole country of Argentina uses just 125 terawatt-hours annually. Under the global climate control initiatives, bitcoin mining faces an imminent risk of global regulatory crackdown.

This risk is especially prominent in China, where coal is the major source of energy (accounting for almost 60 percent of total) and power generation (accounting for 51 percent of China’s carbon emissions in 2018). In its fourteenth Five-Year Plan in 2021, China set goals for its carbon emissions to peak by 2030 and achieve carbon neutrality by 2060. The heavy carbon emissions of bitcoin mining could undermine these carbon reduction efforts.

CHINA’S ANTI-BITCOIN MOVE

The Chinese government is starting to rein in bitcoin mining as it begins to implement its climate targets at the provincial level. Even renewable energy-rich provinces do not want to accept bitcoin mining projects. They would rather favor energy-intensive projects that fit in Beijing’s development targets, and bitcoin mining is definitely not one of them.

In April 2021, Inner Mongolia shut down all cryptocurrency mining to meet its energy-saving targets. Other provinces are following suit. With China being the largest bitcoin mining country in the world, its crackdown is certainly negative for the fate of the cryptocurrency in China.

The People’s Bank of China had already banned banks and retailers from dealing in bitcoin in 2013. Then in 2017, it shut down all domestic exchanges and banned initial coin offerings that created new bitcoins to fund new ventures. One may argue that the bitcoin industry will just move from China to somewhere else.

The Ponzi Scheme

Coinbase’s 56 million users do not care that most of their transactions are not even settled through any blockchain at all. This is evidence of speculation, with the punters only interested in using bitcoin to get more dollars (the fiat currency that it is supposed to drive out). Hence the Ponzi game and bitcoin bubble: Buyers pile into bitcoin based on a captivating but fictitious story, hoping to sell it at higher prices to someone else. When the underlying story crumbles, the whole pyramid collapses.

—C. Lo

From a climate-control perspective, the regulatory risk in China will also likely happen in other countries seeking to ameliorate the risk of global warming. So bitcoin/crypto mining will have nowhere to go in the longer term, though the short-term impact on supply could squeeze bitcoin's price higher and prolong its bubble.

Despite China's ban, millions of Chinese still trade bitcoin through overseas exchanges, or through local brokers arranging peer-to-peer trades without an exchange, and/or using Tether as a trading conduit. This prompted the People's Bank of China to explore issuing an official digital currency beginning in 2014—the DCEP—and it has been experimenting with DCEP's circulation since 2017. Beijing even plans to use its e-CNY as a means of payments in the 2022 Winter Olympics that it will be hosting.

CBDCS ARE COMING

The trend is for global central banks to develop and offer CBDCs for both economic and political reasons that could marginalize cryptocurrencies. Economically, they want to protect their monetary systems and currencies to secure economic management sovereignty. China's stance is clearly anti-bitcoin, with the People's Bank of China aiming to replace cash with a centrally controlled e-CNY that will give it “controllable anonymity.” This is a direct attack on cryptos' untraceable anonymity.

The fixed supply of bitcoin (and cryptos) is the biggest potential “economic apocalypse” that central banks want to avoid. A “bitcoin-ized” economy (that is, with the

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fixed-supply bitcoin replacing all fiat money) would deprive the central bank of the ability to implement countercyclical policies. It is simple economics: If you fix nominal variables (bitcoin in our case here), the real output has to adjust violently to absorb economic shocks.

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So in case of an economic recession, when bitcoin cannot expand, economic output would go into a free fall. It was this problem of rigid money supply that led to the demise of the gold standard and the Bretton Woods system as they deprived governments of the ability to counteract large negative economic shocks, financial crises, and price deflation. Does anyone still think bitcoin's fixed supply is a sure-fire benefit?

The environmental damage of bitcoin mining is just an additional reason for the global authorities to tighten regulatory control of cryptos. China shows vividly how quickly regulators could destroy the decentralized crypto market.

Politically, CBDCs will inject a new dimension of competing sovereign interests, wielding global influence in a future currency war. When a CBDC is generally accepted by the global community, it will boost the issuing country's currency dominance in the global reserves pool and thus help it advance its foreign policy claims.

Currencies are prized as reserve assets when they satisfy two conditions. First, the currency must be stable, liquid, and widely used in international transactions, and second, it must be backed by a country that has important linkages to the global system. An emerging megatrend is China's digital revolution, putting it on a path to satisfy these criteria, albeit slowly, in the long term. China is also inspiring, and putting pressure on, other countries to explore CBDC development.

CRYPTO SHOOTING ITSELF IN THE FOOT

The crypto community is fighting back by addressing bitcoin's security and huge energy consumption problems. New types of intermediaries such as custodian wallets have emerged. They allow holders to keep their cryptocurrencies at centralized intermediaries—crypto wallets—which in turn offer the familiar password-recovery and access-protection features found in online banking.

To reduce energy consumption, crypto developers are exploring different incentive systems and technological solutions to replace wasteful computation with

more energy-efficient models. Notably, systems based on proof-of-stake can establish a consensus faster, thus solving the transaction puzzle more quickly, by giving more weight to information presented by large coin-holders.

But this also means that the integrity of this system relies on the majority of a crypto-coin's holdings remaining in the hands of honest players. It does not really solve the problem of bitcoin/cryptos being abused by criminals. Furthermore, the information weights that the proof-of-stake systems rely on, in turn, depend on the coin balances being easily verifiable on a digital ledger

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without the need for external information. Holders' identities are inevitably needed for verification. Who has the legal identity of coin holders? The government!

It is obvious that these solutions are replicating some of the features of the conventional financial system and need government's involvement, both of which bitcoin is supposed to eschew. The crypto community is shooting itself in the foot. This highlights another key issue: trust, which cryptocurrencies focus on attacking.

WEAK VERSUS STRONG INSTITUTIONS

The trust issue argues that the social contract supporting cryptos would be less compelling in places with strong institutions. When the public enjoys sound legal and economic systems, with effective government, good consumer protection laws, sound monetary policy, and government guarantees such as deposit insurance against bank failure, bitcoin's decentralized and untraceable anonymous design has little to offer.

Essentially, cryptos thrive under a weak institutional environment. When a strong democratic system deteriorates and its public institutions lose public trust, cryptos emerge, as seen in the rise of bitcoin after the financial crisis when crypto promoters capitalized on the fear and

distrust of fiat money. The strong demand for bitcoin in advanced rich democratic systems reflects sheer speculation on the breakdown of the system or a Ponzi game more than anything.

This, in turn, argues that if governments and their agencies want to guard their economic policy sovereignty, they need to fix their acts to regain public trust. Viewing it positively, the "crypto protest" is a wake-up call for governments to change their economic management behavior to become more responsible and regain credibility and public confidence.

CRYPTO HAS NOT WON THE DAY

Digital currency exchange Coinbase went public in April 2021 to great fanfare. Crypto supporters argue that its successful listing established cryptocurrencies as a force to be reckoned with on Wall Street. Really?

Why do people still want this exchange and why are its shares still priced in U.S. dollars rather than in bitcoin? Blockchains should enable the world to eliminate the middleman and allow smooth direct trading. But ironically, Coinbase is the biggest crypto-trading middleman. Its successful listing and pricing in U.S. dollars show that the crypto community has failed to abandon the traditional state-controlled fiat money system and its middlemen.

Worst still, Coinbase's 56 million users do not care that most of their transactions are not even settled

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If the success of Coinbase's listing signals anything, it is that the state, not crypto, has won the battle and retained control of the financial system of fiat money. ◆