

AGN Global Business Voice: Business Alert

Making Sense of Cryptocurrencies: Part #1



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In this short series of Global Business Voice (GBV) Business Alerts, we explore the unfolding phenomenon of cryptocurrencies, Bitcoin chief amongst them. We are aiming to demystify the topic and put things in layman's terms. In this GBV we unpack Bitcoin mining and why being bad for the planet might burst the bubble.

COMING UP TO DATE:

The recent announcement that the Chinese authorities have imposed fresh curbs on cryptocurrencies has seen the price of Bitcoin fall below \$34000 for the first time in three months. It's a rollercoaster ride.

A year ago in May 2020, 1 Bitcoin was worth about US\$9,000. That was almost US \$30,000 by the end of 2020, and more than double that by mid-April 2021. Tesla bet \$1.5bn on Bitcoin and from 21 March 2021 started to accept it as payment for its cars. However, on 13 May 2021, Elon Musk reversed this policy under pressure from environmentalists. In a tweet, Musk said: "Cryptocurrency is a good idea... but this cannot come at great costs to the environment". By 18 May 2021, Bitcoin had lost around 30% of its value from the previous month, at around US\$45,000. All on the back of a tweet from a car manufacturer.

Most people these days are familiar with the fact that a Bitcoin is an electronic token, with the supply limited and ownership determined by a blockchain algorithm. It is a decentralised system, and by its nature operates entirely outside any structure of supervision or financial regulation. It is said to be practically untraceable and offer anonymity.

Unlike a conventional currency, Bitcoin has no backing of any central bank or pool of resources, labour or even intellectual property. The curious truth is that Bitcoin (or any other cryptocurrency) only has a value to the extent that a counterparty is prepared to accept it for value. That being said, apparently even Goldman Sachs and Morgan Stanley are moving certain clients into Bitcoin - it really seems to have gained an element of mainstream in recent months. But doubts still linger over an investment that has no physical manifestation or regulatory framework. And now, questions are being asked about the environmental cost of Bitcoin mining. Oh, and other cryptocurrencies are also available. Actually, there are many.





Bitcoin miners are essentially computers dedicated to validating all Bitcoin transactions and prohibit any bad actors. The rewards in being a miner can be that you receive Bitcoins for your work. The 'work' and therefore the reward involves completing two things;

- 1. VERIFICATION** - When a Bitcoin transaction takes place it is broadcast to the network of miners who accumulate as many transactions as can fit into a 1 MB block (of data), and go through a mathematical process to verify the block and add it to the chain of past blocks (thus, blockchain).
- 2. GUESS A NUMBER** – this second part is the bit that pays. Basically, the miner also has to guess a number, or at least they have to guess a number that is less than or equal to the secret target number. The secret target number is a massive 16-digit hexadecimal number.

There is no limit to the number of guesses miners can have, there are millions of miners, and multiple trillions of guesses/calculations and miners use massive computing power to guess this number and verify the blocks. To mine successfully, you need to have a guess rate that can be measured in terms of mega-guesses, giga-guesses, or terra-guesses per second. That is a great many guesses. The chances of guessing correctly currently stands at around 1 in 18 trillion, and even then you will be amongst many, many qualifying correct guesses and still a long way from winning a Bitcoin. The numbers involved are simply astronomical.



The environmental issue that has been highlighted by the media more recently revolves around the amount of electrical energy consumed to run the computer muscle required to mine Bitcoin.

The University of Cambridge Centre for Alternative Finance (CCAF) estimates that Bitcoin's total energy consumption is about 130 terawatt-hours (TWh) annually. That is the same consumption as the whole of The Netherlands, or about double that of Bangladesh, a country of around 165 million people. Incredibly, it is over half the energy consumption of all the world's data centres. For context, the same study suggests that Google uses around 12 TWh per annum.



Some say that Bitcoin uses less energy than traditional banking systems. Perhaps a difference is that none of Bitcoin's energy consumption is producing anything, or does anything of intrinsic use or value.

It's purely a giant verification and speculation machine. Bitcoin is a decentralised and unregulated phenomenon, which does not give a clear path to regulation or control, be it on environmental or other grounds.

Perhaps the regulation that might in the end bring the circus under control, will be the unwillingness of both institutions and individuals to be that counterparty that accepts Bitcoin for value. We saw a small example of that with the Tesla situation above. One must wonder how much more it would take before a virtual bubble, bursts.

COMING UP IN THE SERIES 'MAKING SENSE OF CRYPTOCURRENCIES' ...

Practicalities - How do you store it, spend it, and cash out?

Why is it worth anything at all? A brief history of bubbles.

What might be practical advice for clients?

Sources: Investopedia, Cambridge Centre for Alternative Finance, Forbes, BBC, Visualcapitalist.

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