

Many Bitcoin Miners Are at Risk of Turning Unprofitable

By **Olga Kharif**

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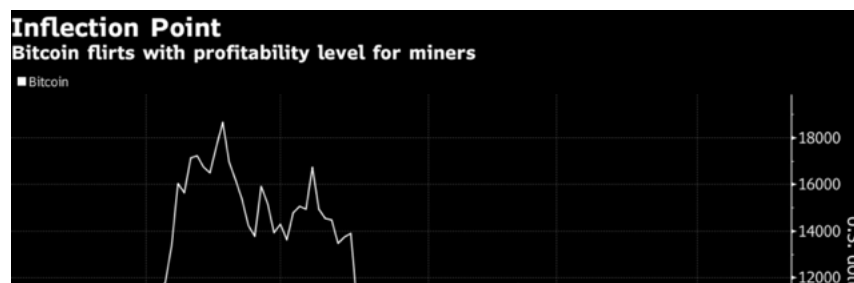
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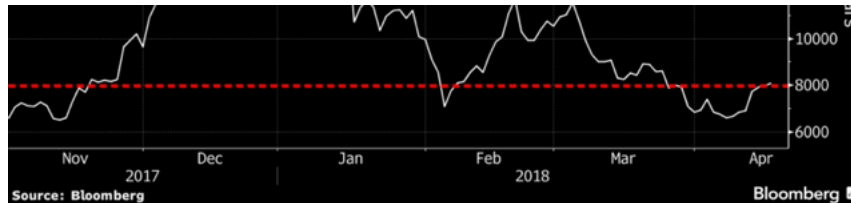
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- Large miners Bitmain, Bitfury are seen increasing dominance
 - Dorm-room miners are becoming a relic of the Bitcoin bubble
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Bitcoin is at an inflection point.

Even with the price back above \$8,000, many of the so-called miners that perform the complex calculations to generate the digital currency are at risk of turning unprofitable. If prices drop below that threshold again for an extended period, there will likely be a swifter consolidation to industrial-scale mining. That could knock out the last guy-in-a-dorm-room operations and leave holders of the currency vulnerable to the dictates of the big miners.

"It's totally different this year than last year," Silicon Valley venture capitalist Bill Tai said in an interview. "The bitcoin mining industry was this mysterious dark cottage industry, and it's about to grow up and about to have elements of institutional scalability at all levels."





Smaller miners will drop out, and only five to 10 of the largest will survive and be profitable, said Tai, who serves as chairman of [Hut 8 Mining Corp.](https://www.businesswire.com/news/home/20171204005288/en/Hut-8-Partners-Bitfury-Group-Establish-North) [<https://www.businesswire.com/news/home/20171204005288/en/Hut-8-Partners-Bitfury-Group-Establish-North>](https://www.businesswire.com/news/home/20171204005288/en/Hut-8-Partners-Bitfury-Group-Establish-North), the capital financing arm in North America for Amsterdam-based Bitfury Group Ltd., one of the biggest makers of crypto-mining equipment. When the price of Bitcoin approached \$19,000 last year, Bitfury had to turn some customers away as \$1.9 billion of orders streamed in, he said.

More concentration could also hold a lot of sway over Bitcoin's price. Miners hold between 20 percent and 30 percent of all Bitcoins, according to [Lucas Nuzzi](https://www.digitalassetresearch.com/dar-process-approach/) [<https://www.digitalassetresearch.com/dar-process-approach/>](https://www.digitalassetresearch.com/dar-process-approach/), a senior analyst at Digital Asset Research. Bitfury alone has mined more than 1 million Bitcoins, Tai said. The company has already sold coins to defray operating expenses. If miners are forced to sell more, that could depress Bitcoin's price.

With mining power -- so-called hashrate -- aggregated in fewer hands, that also increases the risk that a few miners could band together to execute a so-called 51-percent attack -- where they would control enough of the transactions to dictate changes in the development of the blockchain to suit their preferences.

[QuickTake: All About Bitcoin, Blockchain and the Crypto World](https://www.bloomberg.com/view/quicktake/bitcoins) [<https://www.bloomberg.com/view/quicktake/bitcoins>](https://www.bloomberg.com/view/quicktake/bitcoins)

"It has the potential of being dangerous from a security standpoint, since a single entity could use its power in terms of hashrate to disrupt the network," Nuzzi said.

The largest miners are getting bigger. Industry leader Bitmain, which runs China's two largest bitcoin-mining [collectives](https://blockchain.info/pools) [<https://blockchain.info/pools>](https://blockchain.info/pools), has opened offices in Switzerland and the U.S. and is exploring expansion opportunities worldwide. Bitfury will be raising more than \$100 million in the next six months to produce and sell portable mining server farms, each costing at least \$2 million, Tai said. It's also opening up its own, additional farms in the Middle East and Africa, and expanding in Canada. Bitfury is profitable at current prices largely due to its economies of scale, Tai said.

Biggest Expense

Unlike smaller miners, which buy hardware from other manufacturers, Bitmain and Bitfury design and make their own chips and machines. The large players also can place huge orders for parts and even buy electricity at a discount.

"We can buy and source orders of magnitude more," Tai said. "We can buy silicon in large quantities and commit to the electricity grid in chunk sizes. We have the cash to make the deposits and set them up." The company is in discussions to connect to a nuclear power plant that's going online in about 18 months, he said.

Many smaller miners are trying to cut costs by relocating to locations such as Springfield, Missouri, where buildings -- abandoned factories and car dealerships -- can be had for as little as \$1 a square foot. Electricity can cost between \$3,224 and more than \$9,000 to mine a single Bitcoin, depending on the state, according to Crescent Electric Supply Company's [estimates](https://blog.cesco.com/blog/bitcoin-mining-costs-per-state) <<https://blog.cesco.com/blog/bitcoin-mining-costs-per-state>>.

[Power-Hungry Crypto Mines Clean Up as Cost of Electricity Grows](https://www.bloomberg.com/news/articles/2018-02-04/power-hungry-crypto-mines-clean-up-as-cost-of-electricity-grows) <<https://www.bloomberg.com/news/articles/2018-02-04/power-hungry-crypto-mines-clean-up-as-cost-of-electricity-grows>>

At current prices, though, all that may not help the smaller Bitcoin miners that much. Take startup Bcause, which hosts some 11,000 mining machines belonging to clients in Virginia Beach, Virginia. Its clients likely only make a return on their capital investments with Bitcoin above \$9,000 to \$10,000, founder Tom Flack said.

For now, Flack and his customers are betting that Bitcoin's price will rise. Having only opened its facility in February, Bcause is already overbooked until September and is building another facility, as speculators continue to count on higher prices, he said.

But even Flack expects to see miner consolidation in the next 18 to 24 months.

"We've returned to some level of rationality," Flack said.

For more on bitcoin, check out the *Decrypted* podcast:

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