



Academic rigour, journalistic flair

[Arts + Culture](#) [Business + Economy](#) [Education](#) [Environment + Energy](#) [Health + Medicine](#) [Politics + Society](#) [Science + Technology](#) [EU Referendum](#)



Bitcoin mining is about to become a lot less profitable

April 26, 2016 2.34pm BST

A Bitcoin. Julia Tsokur

Email

Twitter

79

Facebook

13

LinkedIn

59

Print

Imagine being told that your wage was going to be cut in half. Well, that's what's soon going to happen to those who make money from [Bitcoin mining](#), the process of earning the [online currency Bitcoin](#).

The current expected date for this change is 11 July 2016. [Many see this](#) as the day when Bitcoin prices will rocket and when Bitcoin owners could make a great deal of money. Others see it as the start of a [Bitcoin crash](#). At present no one quite knows which way it will go.

Bitcoin was created in 2009 by someone known as [Satoshi Nakamoto](#), borrowing from a whole lot of research methods. It is a [cryptocurrency](#), meaning it uses digital encryption techniques to create bitcoins and secure financial transactions. It doesn't need a central government or organisation to regulate it, nor a broker to manage

Author



Bill Buchanan

Head, Centre for Distributed Computing, Networks and Security, Edinburgh Napier University

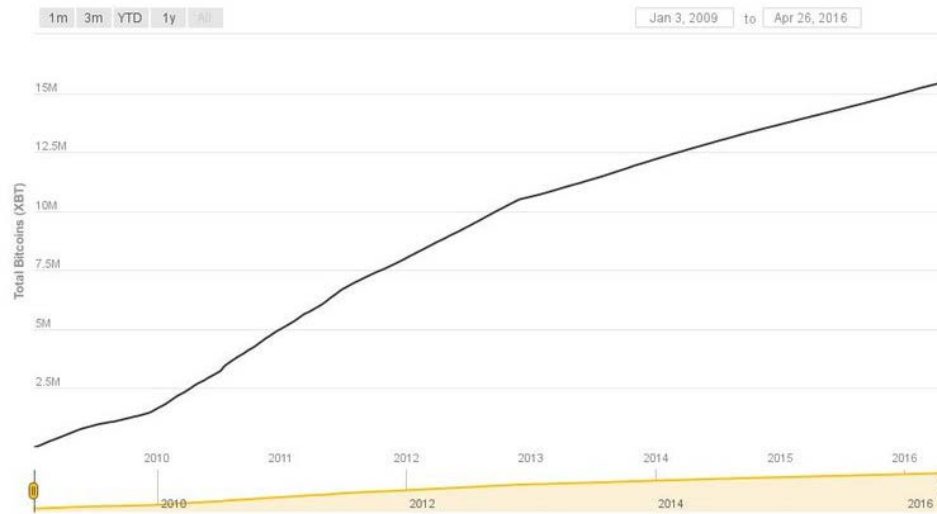
Disclosure statement

Bill Buchanan does not work for, consult, own shares in or receive funding from any company or organization that would benefit from this article, and has disclosed no relevant affiliations beyond the academic appointment above.

payments.

Conventional currencies usually have a central bank that creates money and controls its supply. Bitcoin is instead created when individuals “mine” for it by using their computers to perform complex calculations through special software. The algorithm behind Bitcoin is designed to limit the number of bitcoins that can ever be created.

All Bitcoin transactions are recorded on a public database known as a blockchain. Every time someone mines for Bitcoin, it is recorded with a new block that is transmitted to every Bitcoin app across the network, like a bank updating its online records.



Mining increases the money supply. CoinDesk

Money supply

Unlike with traditional currencies, which can have their money supply reduced by central banks to prevent too much inflation, a bitcoin will stay in circulation forever unless it is accidentally deleted (which should be rare). An over supply of any currency can weaken its value so economists try to carefully balance the supply of cash with the demand. Without a central bank to do this, Bitcoin has an absolute limit built into the system. There are currently around [15.5 million](#) bitcoins in circulation out of a possible maximum of [21 million](#). This means that around 73% of all the bitcoins that will ever be created are already in circulation.

In order to put off the day when there is no Bitcoin left to be mined, mining becomes more difficult as time goes on. The system is also designed to halve the value of what you earn from mining on a specific date. This is expected to be on 11 July 2016, based on the number of new transactions for bitcoins and the estimated rewards for creating the new ledger entries.

Many believe that this halving could have a strong effect on the value of Bitcoin as a whole. If lots of people decide it is no longer worth mining Bitcoin and give up on the system, it could cause the currency to lose its value and start a crash. But if it

Partners



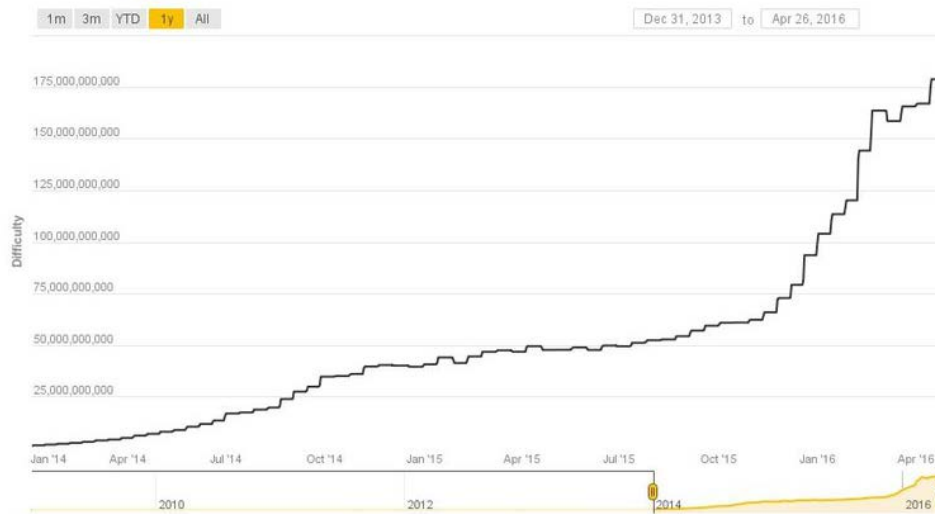
Edinburgh Napier University provides funding as a member of The Conversation UK.

Republish this article

We believe in the free flow of information. We use a [Creative Commons Attribution NoDerivatives](#) licence, so you can republish our articles for free, online or in print.



just helps to limit the supply of Bitcoin while demand stays the same, its value will increase.



Mining Bitcoin gets ever harder. CoinDesk

No room for small fish?

What seems most likely is that Bitcoin mining will become increasingly centralised, carried out by a few big organised mining groups comprising companies and multiple users pooling their resources, while individual miners exit the market. More computing power will be needed to produce the same value of Bitcoin and the bigger pools will be more likely to bare the cost of this while small miners may decide it is no longer economically viable. Currently, users in China make up [more than half](#) of the Bitcoin mining industry, with AntPool and DiscusFish/P2Pool each covering around 17% of the market and BTC China Pool taking another 14%.

The problem is that a more centralised mining network will be open to attack because there are fewer users to go after. Hacking, extortion or even failures in critical infrastructure could bring down large swathes of the mining market in one move.

No one knows for sure what will happen and the answer may even be nothing at all. The price of another cryptocurrency, [Litecoin](#), has remained untouched after its [recent halving process](#). But Litecoin has a considerably smaller scope and limited effects on the global economy. All we know for sure is that we are entering a new phase of discovery for Bitcoin.

Bitcoin Currency Cryptocurrency Blockchain

Tweet

Share

Get newsletter

You might also like

Bitcoin ruling still doesn't answer which country has the right to tax

In Conversation with Bitcoin expert and NYU Professor David Yermack

Quest to find bitcoin's founder highlights currency's biggest threat: the taxman

The "halving" sounds like a horror story and may well turn out to be one for Bitcoin

4 Comments

Oldest

Newest

Comment on this article



Jay Morgan

logged in via Google

Recommend

Don't mine, BUY!

9 days ago • Report

Reply

Javier Atun

logged in via Facebook

Recommend

In reply to Jay Morgan

I would definitely second that, but add that after you buy, trading on <http://bit.do/sellonline> for the more hands-on person or passive investing on a very well established exchange like <http://bit.do/bfx> is a good way to improve your strategy.

9 days ago • Report

Reply

Show all

comments

Most popular on The Conversation

Lyme disease: a ticking time bomb

Why lightsabers would be far more lethal than George Lucas envisioned

Here's what happens to your brain when you give up sugar for Lent

Code-a-cola: how to hide secret messages using fizzy drinks

Labour antisemitism row: there was nothing Zionist about Hitler's plans for the Jews

Lil' Kim and the unbearable whiteness of being

Inside Big Ben: why the world's most famous clock will soon lose its bong

After years of proxy war, Saudi Arabia and Iran are finally squaring up in the open

How to feed and raise a Wikipedia robo-editor

What Brexit would mean for relations between India and the UK

Events

Professorial Lecture Series with Professor Mark Huxham in Edinburgh, Midlothian

Professorial Lecture Series with Professor Jill Stavert in Edinburgh, Midlothian

By me William Shakespeare in London

Communicating with people affected by disaster: lessons from Nepal in London, Islington

Talk and recital: El Acoso at 60: Alejo Carpentier and the Musical Text in London, London, City of

MORE EVENTS

Expert Database

Find experts with knowledge in:*

THE CONVERSATION

Community

[Community standards](#)

[Republishing guidelines](#)

[Friends of The Conversation](#)

[Research and Expert Database](#)

[Events](#)

[Our feeds](#)

[Donate](#)

Company

[Who we are](#)

[Our charter](#)

[Our team](#)

[Our blog](#)

[Partners and funders](#)

[Contributing institutions](#)

[Resource for media](#)

[Contact us](#)

Stay informed

[Subscribe to our Newsletters](#)

[United Kingdom](#)

[Follow us on social media](#)

