

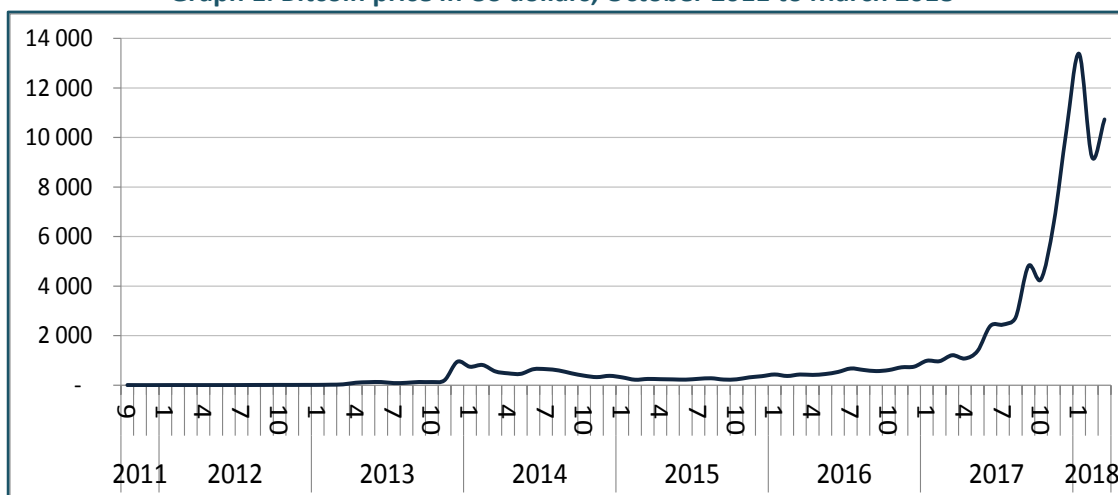
## Briefing Note:

### Bitcoin — Disruptive technology or Ponzi scheme?

You cannot miss the Bitcoin hype, at least if you read the financial pages. It comes up regularly in articles, on twitter, at social events and even in conversations over coffee. In some countries institutions are investing in it, while others have banned it. That said, estimates suggest that worldwide, only between three and six million people actually own any of it.

The price curve for Bitcoin is instructive, especially if you know about asset bubbles. It stayed around the US\$30 mark for many years, then rose slowly to nearly \$200 in 2013. Before January 2017, it climbed toward US\$800. But in 2017, after a flurry of activity it shot up to almost US\$20 000 for a brief period in December, then crashed back to between \$10 000 and \$11 000. That kind of volatility is astounding – and obviously opens the door to speculators.

**Graph 1. Bitcoin price in US dollars, October 2011 to March 2018**



Source: Investing.com, downloaded from za.investing.com in March 2018.

Clearly, if you invested early you might have made millions; if you invested late but got out before the crash, you could also do spectacularly. That's the kind of story we hear about in the urban legend circuit. But if you missed the cycle, you stood to lose a fortune. That's less widely publicised. And it is why financial advisors and experts regularly advise against Bitcoin.

Bitcoin was set up almost a decade ago as a way to disrupt central banks' control of payments. It operates through linked ledgers for users (a "blockchain" system) that are encrypted and password-controlled. In theory, these transactions are completely traceable and exist in the cyberworld forever. In practice, accessing and identifying participants is near impossible. As a result, Bitcoin transactions can take place away from the watchful eye of

central bankers, law enforcement and tax authorities, which means it was for many years seen as a currency for the illicit economy. Equally, Bitcoin is removed from the domain of the big banks.

This poses a fundamental problem, however. Bitcoin is not linked to an underlying asset or have any kind of guarantee to stabilise its value, while its utility as a payments mechanism is in question.

Unlike the stock exchange, the Bitcoin price does not rise because a company has increased its profits and assets. Nor does it have a guarantee from any reserve bank. Rather, its value should in theory equal the amount of energy and time required to generate a coin, which is effectively established by an algorithm. In practice, however, as Bitcoin has become a speculative asset, the price has escalated because new buyers come into the market and bid it up.

The hope that cryptocurrencies would provide an independent payment mechanism seems unlikely to materialise as long as they remain speculative investments with wild swings in value. Moreover, the blockchain system has turned out to be slow compared to existing electronic payment systems such as debit and credit cards, and may never be able to handle the billions of payments made daily around the world.

Furthermore, it's turned out that the promise of encryption often falls short. Estimates suggest that as much as a third of all Bitcoin have disappeared, either lost or stolen.

Bitcoin uses up huge amounts of energy although it creates almost no jobs. In effect, as currently structured, Bitcoin turns energy into speculative fortunes – surely a case of financialisation run mad, given the risks of global warming.

Estimates suggest that each Bitcoin transaction requires thousands of times more electricity than a conventional payment. Bitcoin “miners” have located their hugely energy-intensive operations in areas with cheap or subsidised, often dirty, electricity – initially in China, which has since cracked down on their operations; now anywhere in the world where electricity is available and low cost.

In sum, Bitcoin itself is neither a good investment nor a useful economic initiative, and the risks remain of it being used for illicit transactions. But the underlying idea of self-regulating secure transactions could prove an important disruption to payments systems, if the current shortcomings can be fixed.