ECONOMIC VIEWPOINT

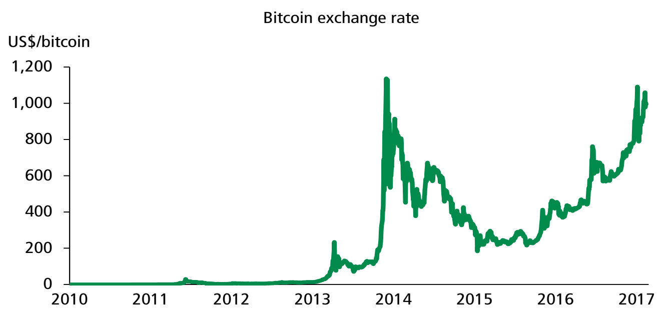
Another surge for the bitcoin

Why?

The bitcoin got a lot of attention in 2013, when its value shot up from US$100 to more than US$1,000. Its momentum petered out and a lengthy correction ensued in 2014. After stabilizing at around US$250 in 2015, the bitcoin began to appreciate again, recently revisiting the US$1,000 mark (graph 1).

This *Economic Viewpoint* looks at the potential causes for the new rise. We might initially think it could be due to scarcity, as the pace at which new bitcoins were being issued was decreased in 2016. On the other hand, a demand effect could be involved, linked to international fund transfers, in which more bitcoin-type currencies are used. Some countries are moving away from bank notes, which could also be a source of bitcoin support. But, as in 2013, it could be another short period of euphoria, which could be followed by a correction.

GRAPH 1
The bitcoin is once again worth around US$1,000



Sources: Bloomberg and Desjardins, Economic Studies

Fewer bitcoins are being put into circulation

The bitcoin is an electronic currency generated by a networked computer program. Any sufficiently powerful computer can contribute to supporting this network. In general, the contribution consists of lending the machine's computing power to validate blocks of transactions. New bitcoins go to those who manage to validate each of the blocks first. The difficulty of the calculations required for validation is adjusted to keep the operation to around 10 minutes per block.

Initially, the reward was set at 50 bitcoins for each block validated. This quantity is nonetheless cut in half every 210,000 blocks, about every four years. This creates a scarcity effect that can support the value of the bitcoins. In July 2016, the reward went from 25 bitcoins to 12.5 bitcoins per block validated.[1]

Approximately 16 billion bitcoins were in circulation at the start of 2017, representing just over three quarters of all the bitcoins that will, in the end, be issued. In fact, the cap is set at 21 million units (graph 2 on page 2). This constraint on issuances constitutes a major difference with traditional currencies; central banks can increase the amounts of traditional currency in circulation indefinitely. If bitcoin demand does not drop in the future, growing scarcity could further stimulate value.

A highly imperfect currency

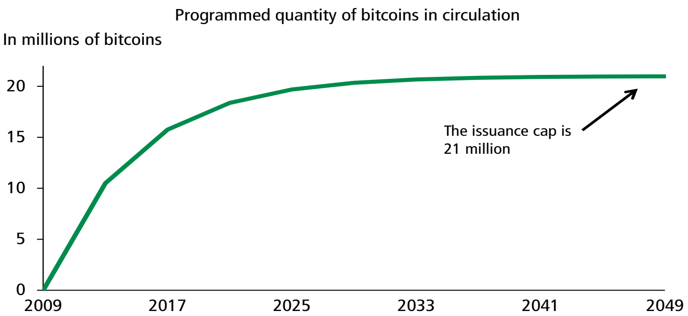
A currency that gain value steadily may seem attractive from the investor's perspective but they would be very bad for the economy. Large scale use of bitcoins would trigger a deflationary economic climate, as the prices of goods and services set in this currency would decline constantly, as would wages. Consumers and businesses would benefit from postponing their purchases and investments. There would also be a big incentive to avoid taking on debt, because the value of debt does not fall with deflation.

[1] www.coindesk.com/live-blog-bitcoin-halving/.

François Dupuis, Vice-President and Chief Economist • Hendrix Vachon, Senior Economist

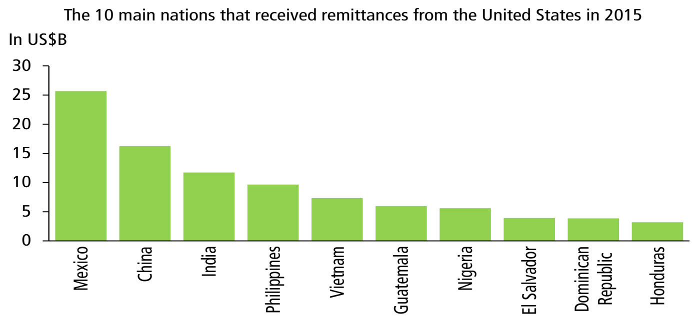
Desjardins, Economic Studies: 514-281-2336 or 1 866-866-7000, ext. 5552336 • desjardins.economics@desjardins.com • desjardins.com/economics

GRAPH 2
New bitcoins will be increasingly rare



Source: Desjardins, Economic Studies

GRAPH 3
Mexico is the country that gets the most remittances from the United States



Sources: World Bank and Desjardins, Economic Studies

Given this kind of major flaw, sustained bitcoin demand is hard to believe in. The lack of a regulatory framework is another major issue for broad utilization. Although they may sometimes seem burdensome and expensive, the rules and safeguards help support the confidence that is the cornerstone of every monetary system.

Potential in the area of international fund transfers

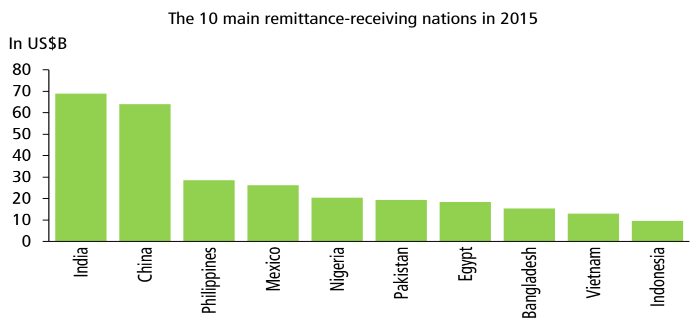
The Bitcoin network does have some interesting aspects. The technology that has been developed makes it possible to negotiate without requiring a middleman. A type of public register provides for transaction security; it is checked simultaneously by all the computers connected to the network, reducing transaction times and costs. These advantages make using bitcoin particularly attractive for international fund transfers. In fact, sending bitcoins to a neighbour is just as easy as sending them to a user on another continent.

Recently, an event in the news ramped up speculation about future growth of bitcoin use in sending money overseas: the election of Donald Trump. He has pledged to build a wall on the Mexican border and send the bill to the Mexicans. Several options are under study for forcing payment of the bill, including putting a tax on remittances to Mexico. If that materialized, many people could turn to bitcoins to avoid the tax. The amounts involved could be fairly substantial. Mexico is the leading global destination for remittances from the United States, with an annual total of more than US$25B (graph 3).

Internationally, the amounts could be even greater if bitcoin use expanded for this type of transaction. The biggest markets would be India, China and the Philippines (graph 4).

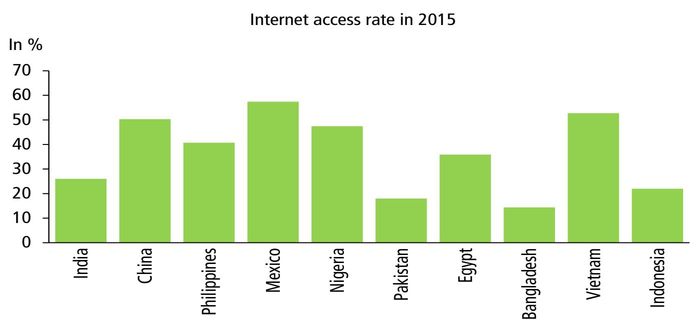
However, technological constraints could keep such a scenario from materializing in the near future. In particular, an Internet connection is required to access the Bitcoin network, something that a large proportion of the populations in emerging nations does not have (graph 5). It also has to be easy to convert bitcoins into local currency once the funds have been transferred.

GRAPH 4
Countries that get the most remittances



Sources: World Bank and Desjardins, Economic Studies

GRAPH 5
Internet usage is often low in countries that get remittances



Sources: World Bank and Desjardins, Economic Studies

Businesses do specialize in this type of conversion, but the fees can be hefty. Bitcoins can also be sold for local currency using a special ATM designed for these transactions. These ATMs remain very scarce, however, especially in emerging nations, and once again, may charge a lot. For example, according to coinatmradar.com, on February 13, 2017, Mexico only had two of this type of

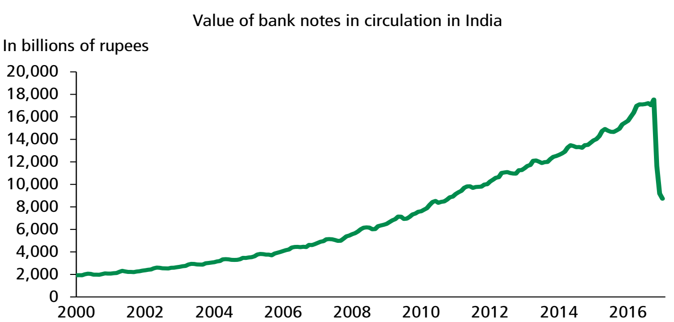
ATM: one in Mexico City and one in Tijuana. The Tijuana ATM was charging a 5.8% conversion fee.[2]

We must also keep in mind that solutions that compete with the Bitcoin network will probably be introduced over time. If the technology behind the network proves as promising as it suggests, other financial firms should adopt it. In return, they could offer more competitive services, reducing the bitcoin's appeal.

Support from the trend toward demonetization?

Another event that seems to have a positive influence on the value of the bitcoin is the withdrawal of two major cash denominations in India: the 500 and 1,000 rupee notes (which are equivalent to the Canadian $10 and $20 bills). Since the withdrawal was announced last November, the amount of paper money in circulation in India has tumbled (graph 6). This forced demonetization has fuelled speculation about whether many Indians would turn to bitcoins in making transactions.

GRAPH 6
India abruptly reduced the number of bank notes in circulation

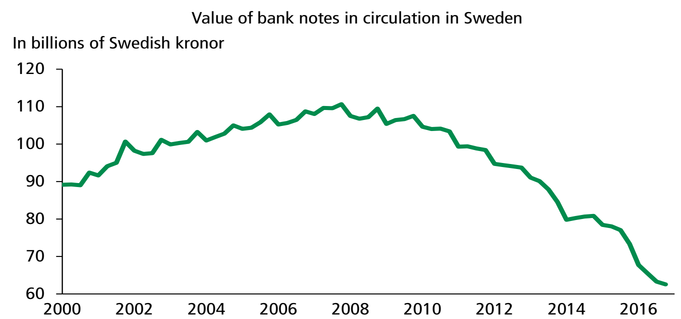


Sources: Datastream and Desjardins, Economic Studies

Confidence in using India's rupee may have been shaken, but replacement options like the bitcoin are not without their flaws. Once again, the Bitcoin network's accessibility is a challenge, especially for remote rural regions whose populations were used to dealing in cash. We also have to consider the reason these denominations were withdrawn. The Indian government stated that the measure was designed to combat the underground economy and reduce the use of fake bills. New bills will also gradually replace the notes that have been withdrawn. However, a cap has been set on the quantity of old bills that can be exchanged for new ones, forcing Indians to deposit some of their cash holdings in bank accounts. The new bank accounts give them access to a multitude of new payment methods. The Bitcoin network is not the only option.

Even before the bitcoin and its counterparts came onto the scene, the use of cash in transactions had already started to decline in favour of innovations like debit and credit cards and, more recently, bank transfers between individuals using the Internet or mobile phones. Sweden is a good example here. In Sweden, the value of the cash in circulation is now less than 60% of what it was at its peak in 2007 (graph 7). Sweden is the advance country that is seeing the biggest retreat by cash. Yet, bitcoins have not seen greater growth there. Other innovations, such as the Swish application for mobile payment, are very successful, however.

GRAPH 7
In Sweden, use of cash is declining rapidly



Sources: Datastream and Desjardins, Economic Studies

What if this is a repeat of 2013?

In short, the bitcoin does not have what it takes to become a major international currency, but that does not prevent speculating about some growth in its use. International fund transfers seem like an ideal field for the bitcoin but, at the same time, its technology could be replicated, making this electronic currency's future uncertain.

As in 2013, the bitcoin's recent appreciation could be short-lived, and finish with a long correction. We must also consider that the bitcoin's recent appreciation is a form of good advertising that could attract new demand. The more bitcoin buyers there are, the more value the currency gains and, the more valuable it becomes, the more buyers it will have. However, this cycle is not eternal; when euphoria gives way to panic, the correction is often brutal.

A single element that hurts demand is enough to trigger a correction. As soon as the value starts to dip or even stagnate, many investors may opt to sell in order to cash in their profits. The more bitcoin sellers there are, the more the currency loses value, and the more value it loses, the more confidence in it is shaken.

[2] www.coinatmradar.com/countries/.

On February 8, China's monetary authorities issued a warning to bitcoin exchanges in mainland China.[3] They must comply with the rules on currency management, money laundering, payment and settlement. The very next day, some of these firms raised their transaction fees or temporarily stopped offering clients the option of withdrawing their bitcoins for currencies. The bitcoin's value lost about 10% after these announcements. This type of event can be a turning point for future bitcoin demand and reminds us that caution is required with respect to this electronic currency.

Hendrix Vachon, Senior Economist

[3] www.coindesk.com/chinas-central-bank-issues-new-warnings-bitcoin-exchanges/.