

Managing the risks of cryptocurrency

Forum: Economical and Social Council

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Introduction

It can be said that cryptocurrencies function is almost the same as cash because the only difference being there is their entirely virtual nature. On the one hand, these new currencies using peer-to-peer payment technology remove the long-time players from the equation. Central banks, mints, financial institutions and regulators, and established transaction networks such as SWIFT, NACHA and existing card platforms are out of the picture and are trying to find out how to adapt. On the other hand, the resulting environment is uncertain and risky.

Nevertheless, there are no doubts that criminals have already adapted their attacks to include these platforms wherever and whenever the opportunity arises. Financial institutions need to remain vigilant and be agile to stay ahead of dishonest actors and ensure they remain relevant in an increasingly virtual, mobile and hyper-connected world. Cryptocurrencies like bitcoin have forever changed business and personal finance.

Definition of key terms

Electronic money (e-money) – storage and transmission systems of traditional and non-state (private) currencies. The term is a very ambiguous one.

Digital currency – electronic money used as an alternative or additional currency.

Cryptocurrency – form of digital currency created and controlled via using cryptographic methods.

Beneficial owner – a legal term where specific property rights ("use and title") in equity belong to a person even though legal title of the property belongs to another person.

Peer-to-peer transactions (also referred to as person-to-person transactions, P2P transactions, or P2P payments) – electronic money transfers made from one person to another through an intermediary, typically referred to as a P2P payment application.

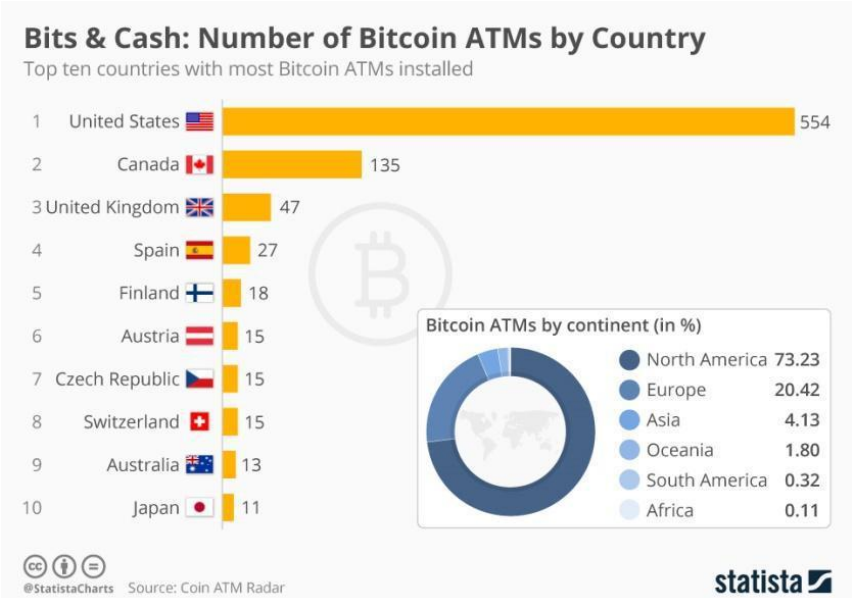
Mining – the process of adding transaction records to Bitcoin's public ledger of past transactions.

Hardfork - a change in the bitcoin protocol, which activates the previously invalid bitcoin blocks.

Background information

The term "cryptocurrency" was firstly used in 2009 after the payment system Bitcoin was founded.

Virtual- and cryptocurrencies have gone through many failures over the years. From currencies themselves, such as E-Gold, through the collapse of exchanges like Mt Gox and the failures of legally questionable marketplaces such as Sheep Marketplace and Silk Road, criminality and controversy have stalked the idea of virtual- and cryptocurrencies.



However it is not just the marketplaces and currencies that are subject to misfortune. Malware created specially to steal bitcoin or any other cryptocurrency currently in circulation has emerged. This happened due to the rapid increase in value of bitcoins in 2013 and 2015

as the currency became more popular. Attacks are commonly aimed at bitcoin wallets and the compromise of private keys.

One of the most oft-cited strengths of cryptocurrency, Distributed Ledger Technology (DLT), can also be a great source of weakness. DLT holds all kinds of promise; a public decentralized block chain that records that transaction's occurrence and authenticity. However, the need to mine new bitcoins has a negative impact on the rate of transactions and throughput. In the short to medium term, this will hinder the transaction rate even at the comparatively low rates of 1-200,000 transactions a day.

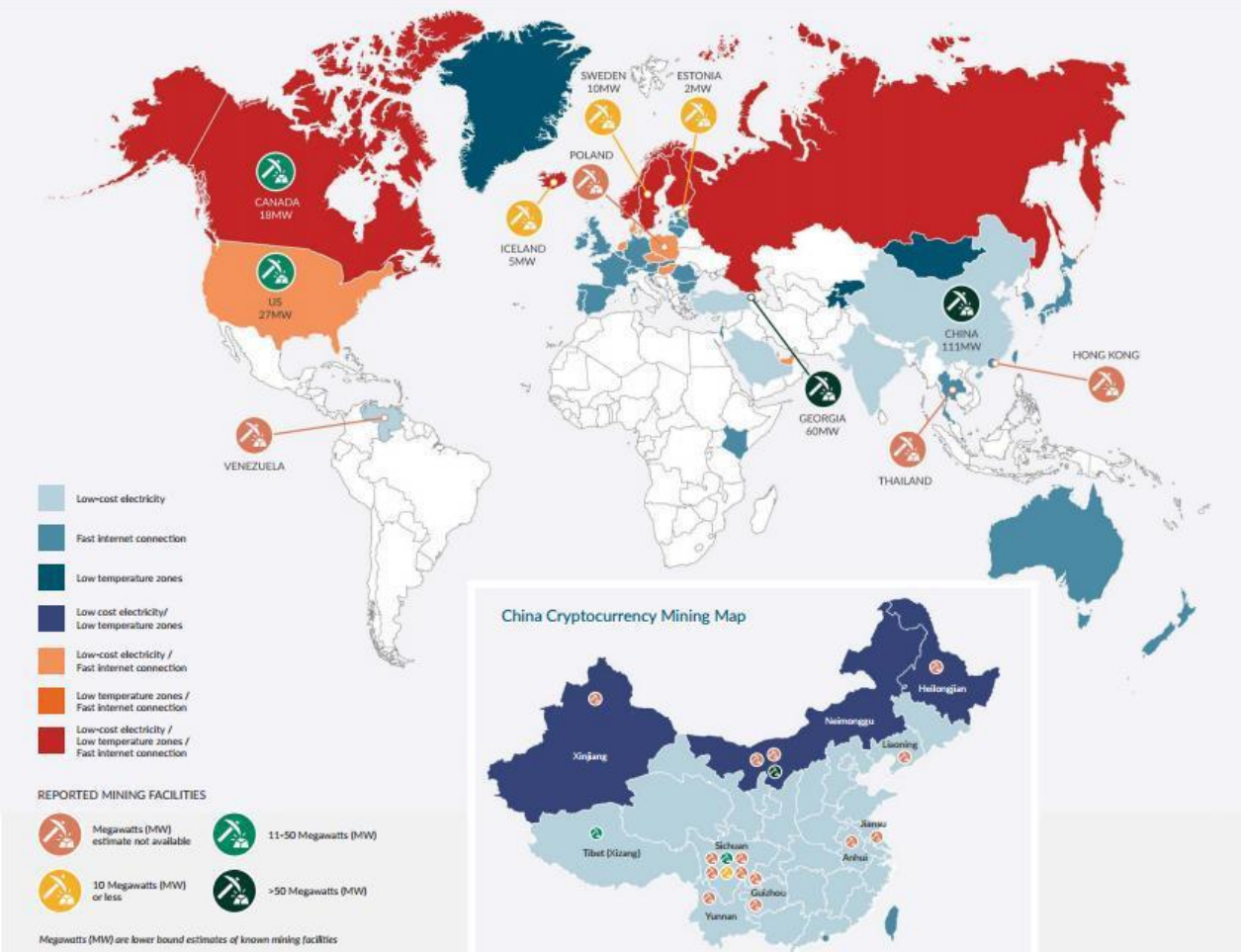
Until recently, most of the miners were concentrated in China. About 5 major Chinese companies extracted a total of 75% of all cryptocurrency, which spent the amount of energy in excess of annual energy consumption of 160 countries. Chinese

authorities announced mining illegal, being alarmed by "excessive consumption of electricity and financial risk". Such countries as Kazakhstan, Bhutan, Chile, and Venezuela are also trying to take care of the miners.

Bitmain Technologies, China's largest mining company, after mining was prohibited in their country, is going to move to Switzerland, which is known for its supportive attitude towards cryptocurrencies and has even claimed ambitions to become a world cryptogam. A few years ago the Swiss city of Zug ran a pilot project so that citizens were able to pay for public services with bitcoins. It is still unclear whether officials kept currency or not.

Moreover, the Evangelical Church in Zurich recently started accepting donations in bitcoin. It is pastor has no doubt that in the near future blockchain and cryptocurrency will become an essential part of people's daily lives.

A huge number of bitcoin hard forks are trying to compensate for their shortcomings, including slow transactions and yearly increasing every year commissions. The problem is actually highly technical, and the reason of it is that a large number of people unexpectedly (especially in 2017) started using cryptocurrency.



Major countries and organizations involved

- The United States of America
- The European Union
- Bitcoin

Bitcoin is a cryptocurrency and worldwide payment system. It is the first decentralized digital currency, as the system works without a central bank or single administrator.

- SwiftCoin

SwiftCoin is a cryptocurrency using peer-to-peer, blockchain, proof-of-work, and encrypted mail application developed by Team Daniel Bruno since 2011. It is an appropriate alternative to Bitcoin that uses similar blockchain technology.

- Japan
- Dogecoin

Dogecoin is a cryptocurrency that uses an Internet meme as its logo. Introduced as a "joke currency" on 6 December 2013, Dogecoin quickly developed its own online community and reached a capitalization of US\$60 million in January 2014; as of December 2017, it has a capitalization of US\$ 1 billion.

- World Bank
- Litecoin

Litecoin is a peer-to-peer cryptocurrency and open source software project. Creation and transfer of coins is based on an open source cryptographic protocol and is not managed by any central authority.

- Interpol Internet Organized Crime Threat (IOCTA)

Relevant Treaties and UN Resolutions

In 2016 the United Nations Research Institute for Social Development has published a 25-sheet review of the possible role that the cryptocurrency can pay in building social and solidarity finance. According to the review, it is liable that within two or

three following decades the cryptocurrencies can be increasingly utilized as an alternative to the actual currency in numerous spheres, ranging from healthcare to the military expenses. The document also discusses the risks that are associated with cryptocurrencies and clearly explains all the basics.

The UN is gradually embracing the block chain system, which is reported in the UN Desk Review from the August 2017.

Previous Attempts to Resolve the Issue

In its 2012 Typology update, the Australian regulator, Austrac, demonstrated the need for financial institutions to focus on the interface between virtual and usual currency. From the perspective of a financial institution, this means monitoring the owners of funds through a customer account on a risk basis, covering the risk associated with the instrument of exchange, the counterparty, the countries involved and the value of the transaction.

Accurate assessment of this risk means financial institutions must have insight into their counterparties- not just bitcoin exchanges, but corporate customers that accept bitcoins as a material source of revenue, such as art dealers, property dealers, and precious stone dealers. Monitoring the source, destination and value of funds through accounts is an important aspect of ongoing due diligence, especially where the potential source of funds could be the proceeds of crime.

The anonymity of bitcoin transactions is a key consideration, and there are a variety of digital tools criminals use to disguise the participants further and the net trade from point A to point B. As a result, transparency and monitoring at the entry and exit is the key.

Possible solutions

There are a few essential takeaways that financial institutions should take to heart:

- Implement risk models associated with bitcoin and other cryptocurrency entities, spanning direct and indirect exposure to AML, fraud, and cyber risk

- Monitoring funds ownerships through customers and counterparties
- Monitoring public lists of licensed bitcoin exchanges, which will help recognize unlicensed exchanges and help in identification of Beneficial Ownership
- Undertake risk media monitoring of bitcoin entities, beneficial owners, and corporate customers accepting bitcoin
- Evaluate cyber threat readiness of corporate business accepting bitcoins

Reliable and Useful Sources

<http://www.darthtrade.com>

<https://lemon-in.com/>

<https://www.theguardian.com/technology/2018/feb/02/bitcoin-bananacoin-prodeum-cryptocurrencies>

<https://www.cnbc.com/cryptocurrency/>

<https://coinranking.com/>

<http://www.independent.co.uk/life-style/gadgets-and-tech/news/bitcoin-price-latest-value-cryptocurrency-plunge-bubble-live-updates-record-november-a8190931.html>

<https://finance.yahoo.com/cryptocurrencies/heatmap/>