

Bitcoin: Currency of the future or money laundering vehicle?

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Analytical contacts

Alan Lloyd Paris

Director, Financial Crime and Compliance Analytics
alan.paris@crisil.com

Srinivasa Manikant Upadhyayula

Lead Analyst, Financial Crime and Compliance Analytics
srinivasa.upadhyayula@crisil.com

or write to us at fcc@crisil.com

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Overview

Digital currency, or digital money, is defined as a means of payment or exchange that occurs in electronic form, with transactions recorded electronically. The traits of digital currency are similar to traditional currencies in that they can be used for payments on purchase or sale of physical goods and services, transferred across locations, and stored in wallets or accounts.

According to the Financial Crimes Enforcement Network (FinCEN), digital currencies are categorized into two broad categories – virtual currencies and crypto-currencies.

Virtual currencies are defined as the digital representation of unregulated money that is neither issued by a central authority nor associated with 'fiat currency' (currency established by government regulations) and which are used and accepted among members of specific groups. Examples of virtual currencies are loyalty points, Facebook credits, Amazon coins, and frequent flyer programs.

Crypto-currencies, on the other hand, are a class of digital monies that use cryptography as a means to protect monetary interactions and monitor the generation of crypto-currency units. Some of the widely-used cryptocurrencies are Bitcoin, Ethereum, and Litecoin.

Bitcoin has now become the de facto standard for crypto-currencies. This can be seen from its exponential growth in the past five years, despite high volatility in price movements. According to Coinbase, a digital asset exchange company based out of San Francisco, California, Bitcoin went from a low of \$10 at the beginning of 2013 to a whopping \$2,753 in May 2017 (or 200x growth in five years).

Bitcoin is widely used as a means to move money around quickly and anonymously. With no central monitoring authority, this raises concerns on the legitimacy of both the source and the destination of the funds transferred. Is this crypto-currency being used as a front to cover money laundering activities, one could ask.

This article explores how criminals can exploit crypto-currencies (especially Bitcoin) as a new vehicle for money laundering or terrorist financing. It also offers insights on the impact of Bitcoin abuse on the current financial and economic environment, and how we can leverage existing anti-money laundering (AML) and know-your-customer (KYC) methodologies to detect and analyze money laundering patterns in Bitcoin transactions.

How Bitcoin works

Bitcoin is considered to be the world's first successful decentralized digital currency for settling international transactions. It rose to fame as a potential and lucrative alternative to existing conventional currencies. Bitcoins are mathematically generated by executing a set of difficult number-crunching tasks using a procedure known as 'mining'. According to its creator (known by the pseudonym Satoshi Nakamoto), the mathematics of the Bitcoin system were set up in a complex way, making Bitcoin 'mining' progressively difficult over time. Currently, there are close to 12 million bitcoins in existence, amounting to around \$6 billion at the current exchange rate.

Bitcoin differs from its conventional peers in two key respects – it is not managed by a single corporation or regulatory body, and does not transact in traditional currencies such as the US dollar or euro. Also, the Bitcoin network does not need to partner with any financial institution or comply with any kind of complex rules for providing bitcoin-based financial services. The easiest way to store Bitcoins is to sign up on an online wallet service, which could facilitate the transactions. All transactions are secured using public-key encryption and each user in the network has the record of the complete history of all transactions in the form of a log. When a user initiates a transfer of Bitcoins using his private key, the particulars of the transfer is updated in the log. The 'miners' in the bitcoin network process the log and confirm the transactions as legitimate. Upon confirmation, these transactions are broadcast so that every node in the network updates the set of confirmed transactions in their databases, which in turn becomes part of an irreversible record of historical transactions, commonly known as the *Blockchain*.

Blockchain is defined as “an incorruptible digital ledger of economic transactions that can be programmed to record not just financial transactions but virtually everything of value”. Information stored on Blockchain exists as a shared database. Other notable features include – encrypted network, incorruptible data, better transparency, and easy accessibility. Blockchain security uses encryption technology through public and private keys. The public key acts as the user's address on Blockchain, while the private key acts as a PIN or password, which permits only the owner to access their Bitcoin or other digital assets.

How to track patterns in Bitcoin laundering

Bitcoin can be bought and sold in return for traditional currency on several exchanges, and it can also be directly transferred across the internet from one user to another. As per FinCEN rules, it is mandatory for money transmitters to register with FinCEN, implement fraud/compliance controls to avert potential money laundering activities, report suspicious financial activity, and obtain licenses for business continuity. In the US, these measures are further mandated by the Bank Secrecy Act and Patriot Act, which act as primary regulations for AML.

Bitcoin is arguably not subjected to the legal requirements of the AML regulations as this crypto-currency is not a 'fiat currency'. This excludes Bitcoin dealers from being registered as money transmitters and hence the transactions are difficult to track and monitor for money laundering. Also, the intricacy of Bitcoin protocols and opacity of the network has massive appeal to those with nefarious intentions, such as terrorist financing or paying for illegal drugs.

There have been instances where the illicit use of Bitcoin has been tracked. For example, there are programs such as Satoshi Dice that allow people to gamble online using bitcoins. Satoshi Dice accounted for more than half of all Bitcoin transactions in June 2013. Another website called Silk Road helped dealers sell millions of dollars of illicit drugs with bitcoin (only mode of payment in that website). Although the original Silk Road was taken down back in 2013, there still are plenty of uncensored marketplaces accessible through the TOR Browser (or through DarkNet) for these illicit uses of Bitcoins.

Another instance of Bitcoin fraud is the Tokyo-based Mt Gox, one of the largest Bitcoin exchanges in the world, which handled 70-85% of all Bitcoin transactions in 2013. In February 2014, the company suspended trading activities, closed its website and exchange service, and filed for bankruptcy. In April 2014, it was announced that around 850,000 Bitcoins worth \$450 million that belonged to customers were missing and stolen.

Tracking of Bitcoin transactions is a very complex and daunting task. Bitcoin identities are not explicitly tied to real-world individuals or organizations. Like cash, Bitcoin transactions do not explicitly identify the payer or the payee, and are irreversible. Most anti-money laundering analysts conclude that a key "advantage" of Bitcoin for criminals is that "law enforcement faces difficulties in detecting suspicious activity, identifying users and obtaining transaction records".

All the same, it is imperative that banks and other financial institutions know if the exchange of Bitcoins for fiat currency by their customer matches the data captured from the transaction, or other information available on public and private databases. Also, All Bitcoin ATM vendors are required to identify and track the person who transacts with Bitcoins through their systems. This is done to ensure that customer transactions are in line with the AML and KYC norms. Financial institutions should implement a customer (or enhanced) due diligence whenever their customers transact with Bitcoins (either buying or selling) so that potential money laundering through bitcoins can be tracked and prevented. These measures will deter customers and vendors who deal in Bitcoins from committing money laundering and criminal activities through Bitcoin circulation.

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Argentina | China | Hong Kong | **India** | Poland | Singapore | UK | USA

CRISIL Limited: CRISIL House, Central Avenue, Hiranandani Business Park, Powai, Mumbai – 400076. India

Phone: + 91 22 3342 3000 | Fax: + 91 22 3342 3001 | www.crisil.com

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