



How can criminals manipulate cryptocurrency markets?

Cryptocurrencies like bitcoin are based on systems that are supposed to be inherently protected from fraud. Yet the U.S. Department of Justice has opened a criminal investigation into manipulation of bitcoin prices. How is that sort of activity even possible?

From researching blockchain and cryptocurrencies for the past three years, I know that blockchain systems have some immutable security features. For instance, if I sent you some amount of bitcoin, and that transaction were recorded in the blockchain ledger, I couldn't force the system to give that money back. The technology itself prevents the transaction from being reversed.

One type of fraud investigators are looking into is called “spoofing,” in which people place orders but cancel them before the deal is finalized – often without even having to pay a service fee. That makes it look like there’s more demand for bitcoin than there actually is, driving up the value of each bitcoin.



But that is only true if transactions happen within the system. And there are other elements of crypto currency technologies that actually make fraud easier.

That sort of manipulation is possible with almost any type of asset. Bitcoin is more susceptible than stocks or bonds because so few people hold large amounts of bitcoin. The largest 1,000 bitcoin accounts hold 40 percent of all the bitcoins in existence – with almost 20 percent held in just 100 accounts.

TRADING BITCOIN LIKE STOCKS



Some of the problems the Justice Department is investigating appear to have arisen because bitcoin enthusiasts are not treating cryptocurrencies as a means of payment like dollars. Rather, they’re behaving as if bitcoins and their ilk are speculative assets like stocks and bonds. So they’re placing orders to buy bitcoin in advance, only later completing the deal.

Many of the people who own large amounts of bitcoin have been in the crypto currency community for number of years and know each other. They can take coordinated actions to increase or decrease prices – and because there’s no real regulation of crypto currency markets, it might not even be illegal for them to do so.

There are fewer protections for crypto currency trading, in part because it's so new. For instance, a high volatility in stock prices would trigger "circuit breakers" in the U.S., halting trading and resetting prices to limit investors' losses. Cryptocurrency markets have no such built-in mechanisms.

EXPLOITING ANONYMITY

Another type of fraud the Justice Department is investigating is called "wash trading," in which one person sets up what looks like a legitimate purchase and- sale deal, but actually does the deal with himself or herself. That makes it look like there is more activity in the market than there actually is, artificially increasing demand and value.

Anyone can have as many crypto currency accounts as they wish to set up. And many blockchain-based systems keep users' identities anonymous. The transactions themselves – if they actually happen – are recorded and publicly viewable, but the accounts involved are only identified with bitcoin addresses, which are long alphanumeric codes like

That anonymity can make it very hard to prove that wash trading is happening and challenges law enforcement to identify and catch fraudsters. At a June 2017 congressional hearing a former federal prosecutor told of crypto currency investigations revealing an account set up by a person claiming to be "Mickey Mouse" living at "123 Main Street."

STRENGTHENING OVERSIGHT



Some countries are starting to regulate crypto currency markets, either under existing regulations or new ones. In 2015, for instance, a federal investigation found that the U.S. crypto currency company Ripple Labs had not properly followed antimoney laundering laws and rules about getting accurate customer identification information.

In May 2018, 40 jurisdictions including U.S. states, Canadian provinces and national regulators in both countries launched a formal probe dubbed "Operation Cryptosweep," to crack down on fraudulent crypto currency trading. They opened as many as 70 investigations and warned roughly 35 companies about potentially violating securities laws.



The vast majority of crypto currency trading, however, happens in countries with few regulations and lax enforcement. For instance, from early 2014 to early 2017, about 90 percent of global bitcoin trading happened through Chinese crypto currency exchanges. At least some of those businesses allegedly falsely inflated trading volumes to attract new customers. China has since banned online crypto currency trading, but people are finding loopholes.



The problems will likely shift to other countries that lack strong rules, which highlights the importance of international cooperation in investigations. Crypto currencies are a global phenomenon; the world's nations – especially those with lots of trading activity – will have to work together to protect consumers.



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