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# itcoin: Not So Scary

Cryptocurrencies such as [Bitcoin](#) have been used to facilitate crime since their introduction in 2009, but the overall threat they pose to law enforcement is negligible compared to the benefits of a decentralized global currency.

Since their introduction five years ago, cryptocurrencies such as Bitcoin have gained ground as a legitimate way to store, send and receive money. As is the case with many new technologies involving the internet, Bitcoin has been used by criminals in various fashions. The criminal uses can't be ignored and governments are moving towards regulations to help this problem, but overall Bitcoin's use in crime is statistically negligible in comparison to the currency as a whole and its many legitimate uses.

*" I see the tremendous potential for the use of Bitcoin among the more than six billion people in the world who have very limited access to international currencies, international credit markets, and international trade. And I think that use far outweighs the tiny minority that might put such currencies to illicit use. "*

- Andreas Antonopoulos, Bitcoin expert speaking to the Senate of Canada in 2014

Bitcoin has grown from the hobby of IT professionals to an international currency with a historical market cap high of over [\\$8.5 billion](#), according to Blockchain.info.

Lawmakers are acknowledging that Bitcoin has grown past being a novelty and now must decide how the government will handle and regulate cryptocurrencies. Often a driving force behind such regulatory actions is the cited potential illicit uses.

In the past, criminals have abused the fact that Bitcoin was a new and semi-anonymous technology to facilitate illicit drug sales, money laundering, and tax evasion. Bitcoin's rise in popularity and use can be demonstrated by observing the trade price in USD and the amount of transactions per day since its introduction in 2009.

When asked to explain potential misuse of Bitcoin to the [Senate of Canada in 2014](#), Andreas Antonopoulos, a computer scientist and author of *Mastering Bitcoin: Unlocking Digital Cryptocurrencies*, said: "The vast majority of such[nefarious] activities really occur with cash, in fact with the U.S. dollar.... I see the tremendous potential for the use of Bitcoin among the more than six billion people in the world who have very limited access to international currencies, international credit markets, and international trade. And I think that use far outweighs the tiny minority that might put such currencies to illicit use."

## How itcoin Works

Bitcoin, the original open-source cryptocurrency, was created with the intent of providing a suitable alternative to the current banking system. Most financial systems today are based around a

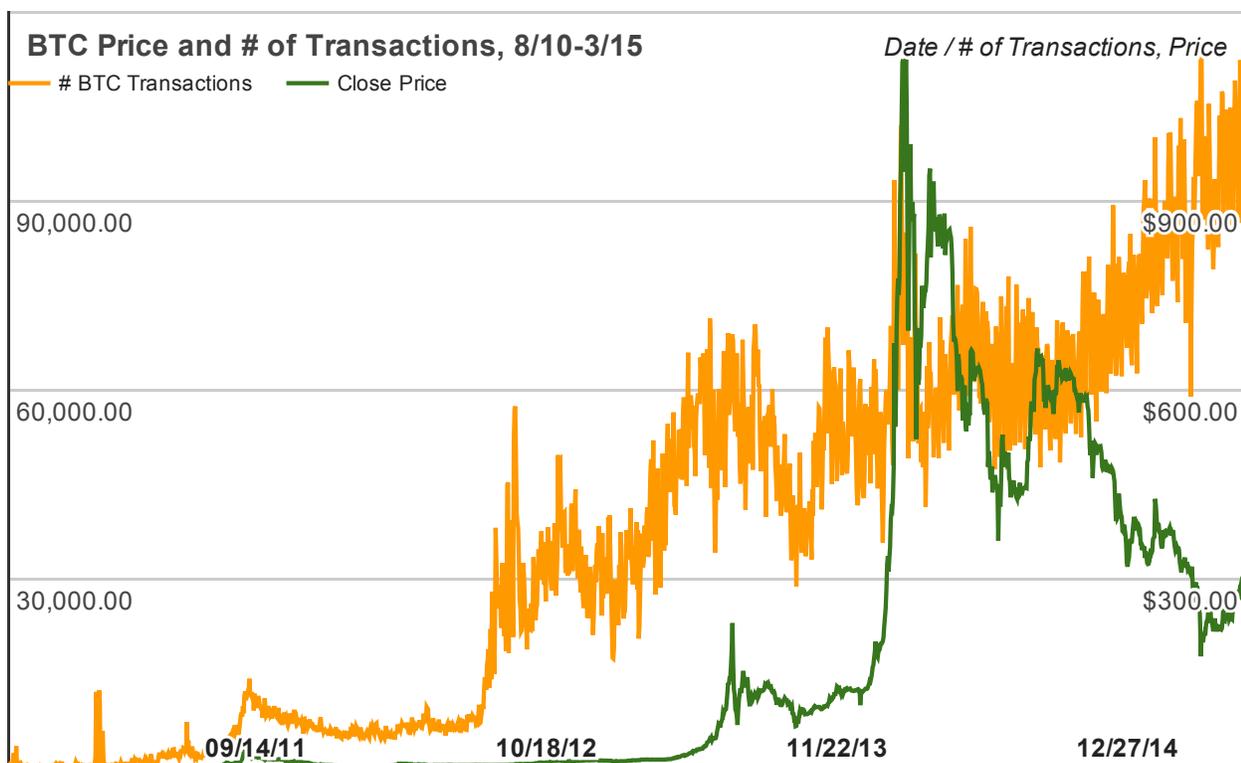
central authority that decides how the currency is issued and handled, such as a government, with the security and robustness of the currency dependant on that central authority.

Libertarians, people in third world countries without established financial systems, and those living in regions with oppressive governments or banking systems have come to recognize Bitcoin because it uses a decentralized system that doesn't place trust in any one entity, such as [Cyprus amid their 2013 banking crisis](#). Bitcoin relies on a peer-to-peer system powered by a public ledger called the blockchain,

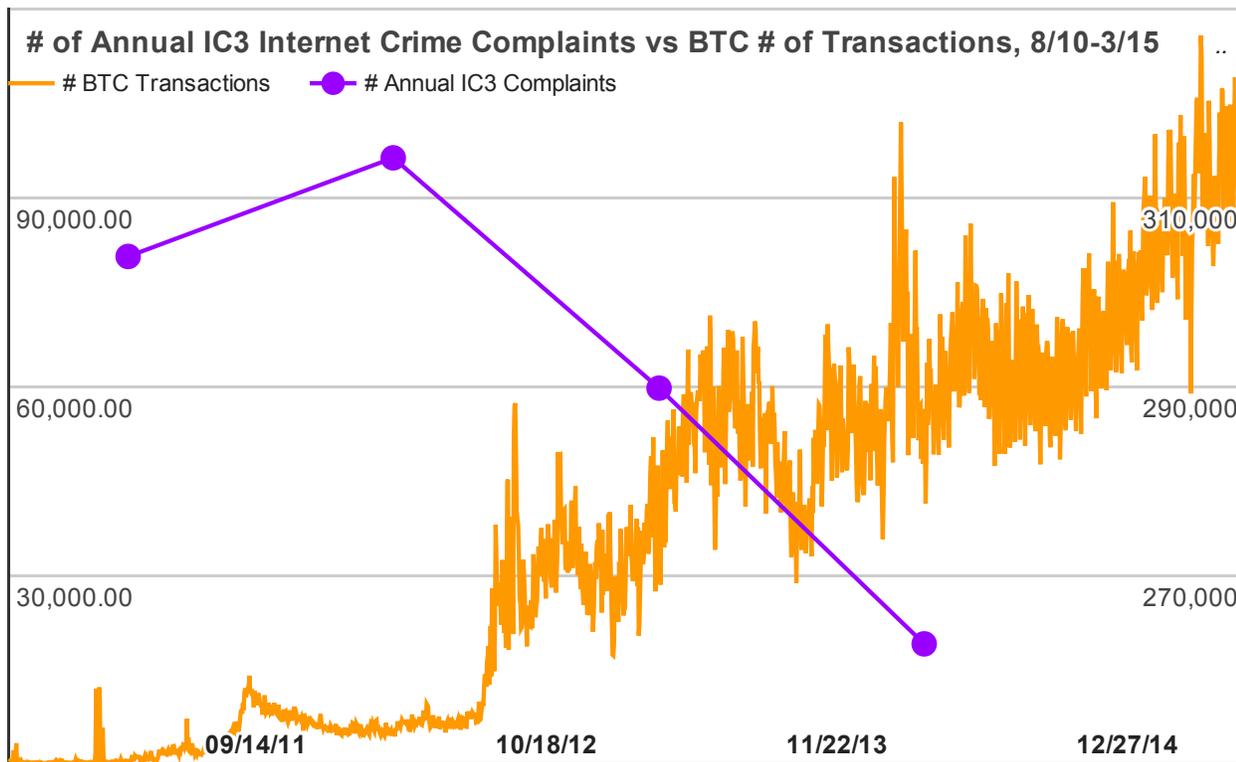
The public blockchain contains information of every transaction in history, ensuring that no funds can be forged and every unit can be tracked. Nobody stores bitcoin, they are stored on the blockchain. Individuals only store the "key" that is required to spend their bitcoin.

## The Numbers

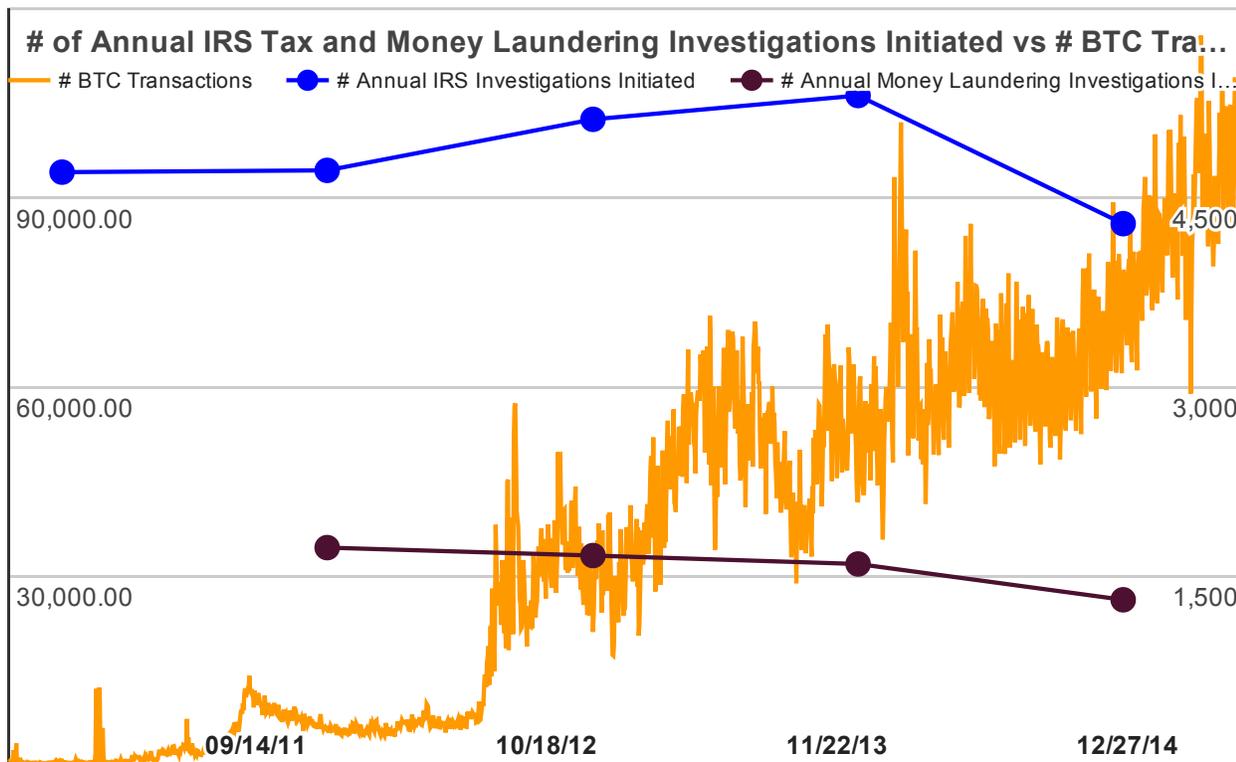
Bitcoin's [trade price from Coindesk](#) in USD and the number of [transactions per day since 2009 from Blockchain.info](#) give a good idea of how much it has risen in popularity. While the price is still extremely volatile, it's apparent that regardless of trade price Bitcoin continues to be used more and more over time.



Using crime statistics data published by the U.S. government it's possible to get an idea of any impact Bitcoin has had on criminal behavior. The U.S. government has yet to publish any data directly related to Bitcoin or other any cryptocurrencies, so instead we can look at the number of internet crime complaints from the [Internet Crime Complaint Center \(IC3\)](#).



We can also use the Internal Revenue Service's (IRS) annual [tax and financial crime statistics](#) and money laundering statistics from [current](#) and [previous years](#) thanks to [archive.org](#).



Looking at the numbers it appears that Bitcoin has not had a massive impact on financial or internet crime in the U.S. However, this doesn't mean that it can't be used to facilitate crime.

Alex Waters was the former chief technology officer, among other roles, of the then-largest U.S. Bitcoin exchange, a developer of the core Bitcoin software, and is currently CEO of Coin.co.

“The criminal behavior here in Bitcoin land is minimal, it is a drop in the bucket compared to the actual criminal behavior that happens with the U.S. dollar. It’s not even comparable, it’s a joke how statistically insignificant it is” he explained in a phone interview when asked what he thought about upcoming regulations looking to change how cryptocurrencies are handled. “The issue though is the public perception and the perceived risk” Waters added.

## Bitcoin in Crime

One person can send money to another knowing nothing other than their wallet address, with no identities associated with either wallet. Often lawmakers cite this lack of identity as a reason for regulation as it can provide anonymity.

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This was a driving factor behind the use of Bitcoin in illegal darknet markets online.

- Matthew Ponsford, faculty of law at the University of Ottawa

“The most widely-cited example both historically and in the primary literature is the Silk Road website which was an online black market which sold narcotics, forged documents, and other illegal services, using Bitcoin currency” explained Matthew Ponsford, faculty of law at the University of Ottawa who has studied how virtual currencies work and are regulated, in an email interview.

Ponsford explained that cryptocurrencies are more susceptible to crime because individuals may not be storing their keys that give them access to their funds on secure computers. “Computer experts use the blockchain method of verifying transactions in the absence of a central authority. Trades tend to be secure, but the storage of Bitcoin is not. For instance, 740,000 stored bitcoins were lost on Mt. Gox (a Japanese Bitcoin exchange system),” said Ponsford.

As regulatory actions are taken by governments around the world, the aim is for the criminal uses of Bitcoin to start winding down. Law enforcement agencies have had time to study how it works and how to track individuals and transactions throughout the network.

Although illegal use of Bitcoin is low relative to other currencies, the activities are real and it has facilitated global online crime. Ponsford explained: “If adequate controls are not implemented, terrorist groups, such as ISIS or Boko Haram, may successfully finance their illegal operations in the U.S. or elsewhere. Although cryptocurrencies offer innovative opportunities, associated risks cannot be understated.”

When speaking with experts and advocates who have invested heavily in the bitcoin ecosystem it’s difficult to ignore their altruistic vision for the great societal benefits a decentralized global currency brings. Alex Waters, a clear believer in the positive potential for Bitcoin, said: “Bitcoin empowers individuals. You can be somebody living in a really oppressive government regime, let’s say in Sub Saharan Africa, and if you had access to a phone and access to the internet you can participate in global commerce.”

## Sources

- Alex Waters, former CTO CIO and COO of the Bitinstant Bitcoin exchange
- Matthew Ponsford, faculty of law at the University of Ottawa
- [The Rise and Rise of Bitcoin](#), a documentary by Nicholas Mross
- [Blockchain.info](#) for transactional volume and market cap data
- [Coindesk.com](#) for Bitcoin historical price data
- Internal Revenue Service tax and financial crime [data](#)
- Internal Revenue Service money laundering statistics from [current](#) and [previous years](#) thanks to [archive.org](#)
- Internet Crime Complaint Center [annual reports](#)
- Andreas Antonopoulos speaking to the [Senate of Canada in 2014](#)